=> d ibib abs ind l5 1-2

L5 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:1006792 HCAPLUS
DOCUMENT NUMBER: 140:23265
TITLE: Anti-spasmodic agents comprising **xenon** gas
INVENTOR(S): Neu, Peter; **Pilger, Carsten**; **Reyle-Hahn, Matthias**
PATENT ASSIGNEE(S): Messer Griesheim G.m.b.H., Germany
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003105872	A1	20031224	WO 2003-EP6190	20030612
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10326999	A1	20031224	DE 2003-10326999	20030612
DE 10327000	A1	20031224	DE 2003-10327000	20030612
EP 1515731	A1	20050323	EP 2003-738021	20030612
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005533787	T2	20051110	JP 2004-512774	20030612
DE 10328272	A1	20040115	DE 2003-10328272	20030623
US 2005244508	A1	20051103	US 2004-517722	20041210
PRIORITY APPLN. INFO.:			DE 2002-10226191 A	20020612
			DE 2002-10226193 A	20020612
			DE 2002-10227974 A	20020622
			DE 2002-10228194 A1	20020624
			DE 2002-10236765 A1	20020810
			WO 2003-EP6190 W	20030612

AB **Xenon** or **xenon**-containing gases and optionally an NO source find application as anti-spasmodics. The anti-spasmodic is preferably a medicament for the treatment of vasospasms, in particular for the treatment of cerebral vasospasms or coronary vasospasms.

IC ICM A61K033-00
ICS A61P001-06; A61P023-00
CC 1-11 (Pharmacology)
Section cross-reference(s): 63
ST spasmolytics **xenon** gas cerebrum vasospasm
IT Anti-ischemic agents
Breathing (animal)
Cognitive disorders
Nervous system agents
Vasodilators
(anti-spasmodic agents comprising **xenon** gas)
IT Artery, disease
(cerebral, spasm; anti-spasmodic agents comprising **xenon** gas)

IT Brain, disease
(cerebrovascular; anti-spasmodic agents comprising **xenon** gas)
IT Drug delivery systems
(gases; anti-spasmodic agents comprising **xenon** gas)
IT Drug delivery systems
(injections, i.v., in combination therapy with **xenon**; anti-spasmodic agents comprising **xenon** gas)
IT Drug delivery systems
(oral, in combination therapy with **xenon**; anti-spasmodic agents comprising **xenon** gas)
IT Surgery
(post-operative cognitive disease; anti-spasmodic agents comprising **xenon** gas)
IT Blood vessel, disease
(spasm; anti-spasmodic agents comprising **xenon** gas)
IT Muscle relaxants
(spasmolytics; anti-spasmodic agents comprising **xenon** gas)
IT Brain, disease
(stroke; anti-spasmodic agents comprising **xenon** gas)
IT 7440-63-3, **Xenon**, biological studies 7782-44-7, Oxygen, biological studies 10102-43-9, **Nitric oxide**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-spasmodic agents comprising **xenon** gas)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:1006791 HCAPLUS
DOCUMENT NUMBER: 140:23264
TITLE: Cerebral protection with a gas comprising **xenon**
INVENTOR(S): Neu, Peter; **Pilger, Carsten**; **Reyle-Hahn, Matthias**
PATENT ASSIGNEE(S): Messer Griesheim G.m.b.H., Germany
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003105871	A1	20031224	WO 2003-EP6157	20030612
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10326999	A1	20031224	DE 2003-10326999	20030612
EP 1515732	A1	20050323	EP 2003-759935	20030612
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

JP 2005533062	T2	20051104	JP 2004-512773	20030612
DE 10328271	A1	20040115	DE 2003-10328271	20030623
US 2005255168	A1	20051117	US 2004-517723	20041210
PRIORITY APPLN. INFO.:			DE 2002-10226191	A 20020612
			DE 2002-10227975	A 20020622
			DE 2002-10236765	A 20020810
			DE 2002-10228194	A1 20020624
			WO 2003-EP6157	W 20030612

AB **Xenon** or **xenon**-containing gases and optionally an NO source are used as medicament for cerebral protection. Cerebral protection is defined as reducing or preventing cerebral functional disorders of various causes, above all as a result of perfusion disruptions of unclear etiol. The medicament for cerebral protection can be used for prophylaxis of perfusion disruptions and for therapy after the appearance of cerebral disorders of whatever cause, e.g. cognitive, sensory, or motor disorders.

IC ICM A61K033-00
ICS A61P025-00

CC 1-11 (Pharmacology)

ST cerebral protection **xenon**

IT Brain, disease
(cerebral perfusion disorder; **xenon** for cerebral protection)

IT Brain, disease
(cerebrovascular; **xenon** for cerebral protection)

IT Drug delivery systems
(gases; **xenon** for cerebral protection)

IT Gases
(inert; **xenon** for cerebral protection)

IT Drug delivery systems
(liqs.; **xenon** for cerebral protection)

IT Cytoprotective agents
(neuroprotective; **xenon** for cerebral protection)

IT Disease, animal
(post-ischemic syndrome; **xenon** for cerebral protection)

IT Drug delivery systems
(solids; **xenon** for cerebral protection)

IT Brain, disease
(stroke; **xenon** for cerebral protection)

IT Anti-ischemic agents
Brain, disease
Cognition enhancers
Cognitive disorders
Ischemia
Nervous system agents
Surgery
Vasodilators
(**xenon** for cerebral protection)

IT 7440-63-3, **Xenon**, biological studies 7782-44-7, Oxygen, biological studies 10102-43-9, **Nitric oxide**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**xenon** for cerebral protection)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d his ful

     (FILE 'HOME' ENTERED AT 13:51:51 ON 10 JAN 2006)

     FILE 'HCAPLUS' ENTERED AT 13:52:34 ON 10 JAN 2006
                E PETER NEW/AU
                E PETER NEU/AU
                E PILGER CARSTEN/AU
L1           26 SEA ABB=ON  ("PILGER C RICHARD JR"/AU OR "PILGER C W"/AU OR
                "PILGER CARSTEN"/AU)
                E REYLE HAHN MATTHIAS/AU
L2           21 SEA ABB=ON  ("REYLE HAHN M"/AU OR "REYLE HAHN MATTHIAS"/AU OR
                "REYLE HAHN MATTHIAS S"/AU)
L3           13 SEA ABB=ON  L1 AND L2
L4           13 SEA ABB=ON  L3 AND ?XENON?
L5            2 SEA ABB=ON  L4 AND ?NITRIC?(W)?OXIDE?
L6              ANALYZE L5 1-2 CT :      16 TERMS

     FILE 'REGISTRY' ENTERED AT 13:58:06 ON 10 JAN 2006
L7            0 SEA ABB=ON  XENON/CT
L8            1 SEA ABB=ON  XENON/CN
L9            1 SEA ABB=ON  NITRIC OXIDE/CN

     FILE 'HCAPLUS' ENTERED AT 13:58:26 ON 10 JAN 2006
L10         590 SEA ABB=ON  (L8 OR ?XENON?) AND (L9 OR ?NITRIC?(W)?OXIDE?)
L11          24 SEA ABB=ON  L10 AND (?ORAL? OR PO OR ?MOUTH? OR IV OR ?INTRAVEN
                ?)
L12           1 SEA ABB=ON  L11 AND ?VASOSPASM?
L13          24 SEA ABB=ON  L11 OR L12
L14          23 SEA ABB=ON  L13 AND (PRD<20030612 OR PD<20030612)

     FILE 'MEDLINE, BIOSIS, EMBASE, JAPIO, JICST-EPLUS' ENTERED AT 14:00:29 ON
     10 JAN 2006
L15          26 SEA ABB=ON  L13
L16          21 DUP REMOV L15 (5 DUPLICATES REMOVED) 21 cits from databases

     FILE 'USPATFULL' ENTERED AT 14:01:24 ON 10 JAN 2006
L17         424 SEA ABB=ON  L13 AND (PRD<20030612 OR PD<20030612)
L18         226 SEA ABB=ON  L17 AND ?VASODILAT?
L19         156 SEA ABB=ON  L18 AND ?ANTI?(W)?SPASM?
L20         156 SEA ABB=ON  L19 AND ?ISCHEM?
L21         156 SEA ABB=ON  L20 AND (?CEREB? OR ?CORON?)
L22         155 SEA ABB=ON  L21 AND CEREBROVASC?
L23         155 SEA ABB=ON  L22 AND ?DRUG?(W)?DELIV?
L24           2 SEA ABB=ON  L23 AND ?MUSCLE?(W)?RELAX? 2 cits from USPatFull

     FILE 'HCAPLUS' ENTERED AT 14:04:09 ON 10 JAN 2006
L25           1 SEA ABB=ON  L14 AND ?ANTI?(W)?SPASM?
L26          23 SEA ABB=ON  L14 OR L25  23 cits from CA Plus

     FILE HOME

     FILE HCAPLUS

     Copyright of the articles to which records in this database refer is
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     the American Chemical Society and is provided to assist you in searching
```

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FILE COVERS 1907 - 10 Jan 2006 VOL 144 ISS 3
FILE LAST UPDATED: 9 Jan 2006 (20060109/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 JAN 2006 HIGHEST RN 871542-42-6
DICTIONARY FILE UPDATES: 9 JAN 2006 HIGHEST RN 871542-42-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE MEDLINE
FILE LAST UPDATED: 7 JAN 2006 (20060107/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 will soon be available. For details on the 2005 reload, enter HELP RLOAD at an arrow promt (=>).
See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 4 January 2006 (20060104/ED)

FILE EMBASE
FILE COVERS 1974 TO 6 Jan 2006 (20060106/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE JAPIO
FILE LAST UPDATED: 02 JAN 2006 <20060102/UP>
FILE COVERS APR 1973 TO SEPTEMBER 29, 2005

<<< GRAPHIC IMAGES AVAILABLE >>>

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 10 JAN 2006 (20060110/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 10 Jan 2006 (20060110/PD)
FILE LAST UPDATED: 10 Jan 2006 (20060110/ED)
HIGHEST GRANTED PATENT NUMBER: US6986161
HIGHEST APPLICATION PUBLICATION NUMBER: US2006005290
CA INDEXING IS CURRENT THROUGH 10 Jan 2006 (20060110/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 10 Jan 2006 (20060110/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<

>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d que stat l26
L8            1 SEA FILE=REGISTRY ABB=ON  XENON/CN
L9            1 SEA FILE=REGISTRY ABB=ON  NITRIC OXIDE/CN
L10         590 SEA FILE=HCAPLUS ABB=ON  (L8 OR ?XENON?) AND (L9 OR ?NITRIC?(W)
                ?OXIDE?)
L11          24 SEA FILE=HCAPLUS ABB=ON  L10 AND (?ORAL? OR PO OR ?MOUTH? OR
                IV OR ?INTRAVEN?)
L12           1 SEA FILE=HCAPLUS ABB=ON  L11 AND ?VASOSPASM?
L13          24 SEA FILE=HCAPLUS ABB=ON  L11 OR L12
L14          23 SEA FILE=HCAPLUS ABB=ON  L13 AND (PRD<20030612 OR PD<20030612)
L25           1 SEA FILE=HCAPLUS ABB=ON  L14 AND ?ANTI?(W)?SPASM?
L26          23 SEA FILE=HCAPLUS ABB=ON  L14 OR L25

=> d ibib abs ind l26 1-23

L26  ANSWER 1 OF 23  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2003:1006792  HCAPLUS
DOCUMENT NUMBER:          140:23265
TITLE:                    Anti-spasmodic agents comprising
                          xenon gas
INVENTOR(S):              Neu, Peter; Pilger, Carsten; Reyle-Hahn, Matthias
PATENT ASSIGNEE(S):       Messer Griesheim G.m.b.H., Germany
SOURCE:                   PCT Int. Appl., 23 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2003105872         A1    20031224    WO 2003-EP6190          20030612 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
             UG, US, UZ, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     DE 10326999           A1    20031224    DE 2003-10326999        20030612 <--
     DE 10327000           A1    20031224    DE 2003-10327000        20030612 <--
     EP 1515731            A1    20050323    EP 2003-738021          20030612 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     JP 2005533787         T2    20051110    JP 2004-512774          20030612 <--
     DE 10328272           A1    20040115    DE 2003-10328272        20030623 <--
     US 2005244508         A1    20051103    US 2004-517722          20041210 <--
PRIORITY APPLN. INFO.:                       DE 2002-10226191     A  20020612 <--
                                             DE 2002-10226193     A  20020612 <--
                                             DE 2002-10227974     A  20020622 <--
                                             DE 2002-10228194     A1 20020624 <--
                                             DE 2002-10236765     A1 20020810 <--
                                             WO 2003-EP6190       W  20030612
AB   Xenon or xenon-containing gases and optionally an NO
     source find application as anti-spasmodics.  The
     anti-spasmodic is preferably a medicament for the
     treatment of vasospasms, in particular for the treatment of
```

cerebral **vasospasms** or coronary **vasospasms**.
IC ICM A61K033-00
ICS A61P001-06; A61P023-00
CC 1-11 (Pharmacology)
Section cross-reference(s): 63
ST spasmolytics **xenon** gas cerebrum **vasospasm**
IT Anti-ischemic agents
Breathing (animal)
Cognitive disorders
Nervous system agents
Vasodilators
(**anti-spasmodic** agents comprising **xenon** gas)
IT Artery, disease
(cerebral, spasm; **anti-spasmodic** agents comprising **xenon** gas)
IT Brain, disease
(cerebrovascular; **anti-spasmodic** agents comprising **xenon** gas)
IT Drug delivery systems
(gases; **anti-spasmodic** agents comprising **xenon** gas)
IT Drug delivery systems
(injections, i.v., in combination therapy with **xenon**; **anti-spasmodic** agents comprising **xenon** gas)
IT Drug delivery systems
(**oral**, in combination therapy with **xenon**; **anti-spasmodic** agents comprising **xenon** gas)
IT Surgery
(post-operative cognitive disease; **anti-spasmodic** agents comprising **xenon** gas)
IT Blood vessel, disease
(spasm; **anti-spasmodic** agents comprising **xenon** gas)
IT Muscle relaxants
(spasmolytics; **anti-spasmodic** agents comprising **xenon** gas)
IT Brain, disease
(stroke; **anti-spasmodic** agents comprising **xenon** gas)
IT **7440-63-3**, **Xenon**, biological studies 7782-44-7, Oxygen, biological studies **10102-43-9**, **Nitric oxide**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anti-spasmodic** agents comprising **xenon** gas)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:950726 HCAPLUS
DOCUMENT NUMBER: 140:22058
TITLE: Method for the low-temperature oxidation of silicon
INVENTOR(S): Ono, Yoshi; Hill, Ray; Burgholzer, Mark A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003224619	A1	20031204	US 2002-164924	20020604
JP 2004015048	A2	20040115	JP 2003-57848	20030304 <--
TW 223856	B1	20041111	TW 2003-92109769	20030425 <--
CN 1467801	A	20040114	CN 2003-136894	20030523 <--
PRIORITY APPLN. INFO.:			US 2002-164924 A	20020604 <--

AB The invention relates to a method for the low-temperature oxidation of silicon that reduces contamination and requires no retrofitting of the chamber. The method consists of the steps of (i) placing a silicon wafer in a vacuum chamber; (ii) maintaining the silicon wafer at a temperature between room temperature and 400°; (iii) introducing an oxidation gas in the vacuum chamber; (iv) dissociating the oxidation gas into O(1D) radical oxygen and irradiating the surface of the silicon wafer with a **xenon** excimer lamp generating light at a wavelength of about 172 nm to eject electrons from the surface of the silicon wafer and forming the reactive oxidizing species over the silicon wafer; and (v) forming an oxide layer on a portion of the silicon wafer.

IC ICM H01L021-31
ICS H01L021-469
INCL 438771000
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 73
ST low temp oxidn silicon
IT Controlled atmospheres
(inert, annealing atmospheric; method for low-temperature oxidation of silicon)
IT Oxidation
(low-temperature; method for low-temperature oxidation of silicon)
IT Annealing
Vacuum chambers
(method for low-temperature oxidation of silicon)
IT UV radiation
(silicon surface treated by; method for low-temperature oxidation of silicon)
IT 7631-86-9P, Silica, uses
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(method for low-temperature oxidation of silicon)
IT 7440-21-3, Silicon, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(method for low-temperature oxidation of silicon)
IT 7782-44-7, Oxygen, processes 10024-97-2, Nitrous oxide, processes 10028-15-6, Ozone, processes **10102-43-9**, Nitrogen oxide (NO), processes
RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(oxidant; method for low-temperature oxidation of silicon)

L26 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:464838 HCAPLUS
DOCUMENT NUMBER: 139:155288
TITLE: Optimized Slater-type basis sets for the elements 1-118
AUTHOR(S): Van Lenthe, E.; Baerends, E. J.

CORPORATE SOURCE: Afdeling Theoretische Chemie, Vrije Universiteit, De Boelelaan 1083, Amsterdam, 1081 HV, Neth.
SOURCE: Journal of Computational Chemistry (**2003**), 24(9), 1142-1156
CODEN: JCCHDD; ISSN: 0192-8651
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Seven different types of Slater type basis sets for the elements H (Z = 1) up to E118 (Z = 118), ranging from a double zeta valence quality up to a quadruple zeta valence quality, are tested in their performance in neutral atomic and diat. oxide calcns. The exponents of the Slater type functions are optimized for the use in (scalar relativistic) zeroth-order regular approximated (ZORA) equations. Atomic tests reveal that, on average, the absolute basis set error of 0.03 kcal/mol in the d. functional calcn. of the valence spinor energies of the neutral atoms with the largest all electron basis set of quadruple zeta quality is lower than the average absolute difference of 0.16 kcal/mol in these valence spinor energies if one compares the results of ZORA equation with those of the fully relativistic Dirac equation. This average absolute basis set error increases to about 1 kcal/mol for the all electron basis sets of triple zeta valence quality, and to approx. 4 kcal/mol for the all electron basis sets of double zeta quality. The mol. tests reveal that, on average, the calculated atomization energies of 118 neutral diat. oxides MO, where the nuclear charge Z of M ranges from Z = 1-118, with the all electron basis sets of triple zeta quality with two polarization functions added are within 1-2 kcal/mol of the benchmark results with the much larger all electron basis sets, which are of quadruple zeta valence quality with four polarization functions added. The accuracy is reduced to about 4-5 kcal/mol if only one polarization function is used in the triple zeta basis sets, and further reduced to approx. 20 kcal/mol if the all electron basis sets of double zeta quality are used. The inclusion of g-type STOs to the large benchmark basis sets had an effect of less than 1 kcal/mol in the calcn. of the atomization energies of the group 2 and group 14 diat. oxides. The basis sets that are optimized for calcns. using the frozen core approximation (frozen core basis sets) have a restricted basis set in the core region compared to the all electron basis sets. On average, the use of these frozen core basis sets give atomic basis set errors that are approx. twice as large as the corresponding all electron basis set errors and mol. atomization energies that are close to the corresponding all electron results. Only if spin-orbit coupling is included in the frozen core calcns. larger errors are found, especially for the heavier elements, due to the addnl. approximation that is made that the basis functions are orthogonalized on scalar relativistic core orbitals.

CC 65-5 (General Physical Chemistry)
ST Slater basis set relativistic ZORA
IT Oxides (inorganic), properties
RL: PRP (Properties)
(diat.; optimized Slater-type basis sets for the elements 1-118 for use in scalar relativistic ZORA method)
IT Atomization enthalpy
Basis sets
Relativistic quantum chemistry
Slater-type orbital
Spin-orbit coupling
(optimized Slater-type basis sets for the elements 1-118 for use in

scalar relativistic ZORA method)

IT Diatomic molecules
(oxides; optimized Slater-type basis sets for the elements 1-118 for use in scalar relativistic ZORA method)

IT 12005-99-1, Arsenic oxide (AsO)
RL: PRP (Properties)
(activated; optimized Slater-type basis sets for the elements 1-118 for use in scalar relativistic ZORA method)

IT 630-08-0, Carbon monoxide, properties 1301-96-8, Silver oxide (AgO) 1304-28-5, Barium oxide (BaO), properties 1304-56-9, Beryllium oxide (BeO), properties 1305-78-8, Calcium oxide (CaO), properties 1306-19-0, Cadmium oxide (CdO), properties 1307-96-6, Cobalt oxide (CoO), properties 1309-48-4, Magnesium oxide (MgO), properties 1313-99-1, Nickel oxide (NiO), properties 1314-08-5, Palladium oxide (PdO) 1314-11-0, Strontium oxide (SrO), properties 1314-13-2, Zinc oxide (ZnO), properties 1317-36-8, Lead oxide (PbO), properties 1317-38-0, Copper oxide (CuO), properties 1332-64-5, Bismuth oxide (BiO) 1344-43-0, Manganese oxide (MnO), properties 1345-25-1, Iron oxide (FeO), properties 3352-57-6, Hydroxyl, properties 7429-90-5, Aluminum, properties 7429-91-6, Dysprosium, properties 7429-92-7, Einsteinium, properties 7439-88-5, Iridium, properties 7439-89-6, Iron, properties 7439-90-9, Krypton, properties 7439-91-0, Lanthanum, properties 7439-92-1, Lead, properties 7439-93-2, Lithium, properties 7439-94-3, Lutetium, properties 7439-95-4, Magnesium, properties 7439-96-5, Manganese, properties 7439-97-6, Mercury, properties 7439-98-7, Molybdenum, properties 7439-99-8, Neptunium, properties 7440-00-8, Neodymium, properties 7440-01-9, Neon, properties 7440-02-0, Nickel, properties 7440-03-1, Niobium, properties 7440-04-2, Osmium, properties 7440-05-3, Palladium, properties 7440-06-4, Platinum, properties 7440-07-5, Plutonium, properties 7440-08-6, Polonium, properties 7440-09-7, Potassium, properties 7440-10-0, Praseodymium, properties 7440-11-1, Mendelevium, properties 7440-12-2, Promethium, properties 7440-13-3, Protactinium, properties 7440-14-4, Radium, properties 7440-15-5, Rhenium, properties 7440-16-6, Rhodium, properties 7440-17-7, Rubidium, properties 7440-18-8, Ruthenium, properties 7440-19-9, Samarium, properties 7440-20-2, Scandium, properties 7440-21-3, Silicon, properties 7440-22-4, Silver, properties 7440-23-5, Sodium, properties 7440-24-6, Strontium, properties 7440-25-7, Tantalum, properties 7440-26-8, Technetium, properties 7440-27-9, Terbium, properties 7440-28-0, Thallium, properties 7440-29-1, Thorium, properties 7440-30-4, Thulium, properties 7440-31-5, Tin, properties 7440-32-6, Titanium, properties 7440-33-7, Tungsten, properties 7440-34-8, Actinium, properties 7440-35-9, Americium, properties 7440-36-0, Antimony, properties 7440-37-1, Argon, properties 7440-38-2, Arsenic, properties 7440-39-3, Barium, properties 7440-40-6, Berkelium, properties 7440-41-7, Beryllium, properties 7440-42-8, Boron, properties 7440-43-9, Cadmium, properties 7440-44-0, Carbon, properties 7440-45-1, Cerium, properties 7440-46-2, Cesium, properties 7440-47-3, Chromium, properties 7440-48-4, Cobalt, properties 7440-50-8, Copper, properties 7440-51-9, Curium, properties 7440-52-0, Erbium, properties 7440-53-1, Europium, properties 7440-54-2, Gadolinium, properties 7440-55-3, Gallium, properties 7440-56-4, Germanium, properties 7440-57-5, Gold, properties 7440-58-6, Hafnium, properties 7440-59-7, Helium, properties 7440-60-0, Holmium, properties 7440-61-1, Uranium, properties 7440-62-2, Vanadium, properties **7440-63-3, Xenon**, properties 7440-64-4, Ytterbium, properties 7440-65-5, Yttrium, properties 7440-66-6, Zinc, properties 7440-67-7, Zirconium, properties 7440-69-9, Bismuth, properties 7440-70-2, Calcium, properties 7440-71-3, Californium, properties 7440-72-4, Fermium,

properties 7440-73-5, Francium, properties 7440-74-6, Indium, properties 7704-34-9, Sulfur, properties 7723-14-0, Phosphorus, properties 7782-44-7, Oxygen, properties 7782-49-2, Selenium, properties 10028-14-5, Nobelium, properties 10043-92-2, Radon, properties 10097-28-6, SiO 10097-32-2, Atomic Bromine, properties **10102-43-9**, Nitrogen oxide (NO), properties 12014-74-3, Cerium oxide (CeO) 12018-00-7, Chromium oxide (CrO) 12020-60-9, Europium oxide (EuO) 12024-08-7, Gallium oxide (GaO) 12024-77-0, Gadolinium oxide (GdO) 12029-22-0, Hafnium oxide (HfO) 12030-48-7, Iridium oxide (IrO) 12031-20-8, Lanthanum oxide (LaO) 12032-02-9, Lutetium oxide (LuO) 12034-57-0, NbO 12035-20-0, Neodymium oxide (NdO) 12035-81-3, Praseodymium oxide (PrO) 12035-82-4, Platinum oxide (PtO) 12035-83-5, Plutonium oxide (PuO) 12035-88-0, Samarium oxide (SmO) 12035-90-4, Tantalum oxide (TaO) 12035-91-5, Terbium oxide (TbO) 12035-93-7, Thorium oxide (ThO) 12035-97-1, Uranium oxide (UO) 12035-98-2, Vanadium oxide (VO) 12035-99-3, Tungsten oxide (WO) 12036-00-9, Yttrium oxide (YO) 12036-01-0, Zirconium oxide (ZrO) 12058-07-0, Molybdenum oxide (MoO) 12059-90-4, PmO 12059-91-5, Scandium oxide (ScO) 12061-70-0, Fluorine oxide (FO) 12136-26-4, Indium oxide (InO) 12137-15-4, Osmium oxide (OsO) 12137-18-7, Rhodium oxide (RhO) 12137-20-1, Titanium oxide (TiO) 12142-77-7, Lithium oxide (LiO) 12143-02-1, Radium oxide (RaO) 12143-03-2, Rhenium oxide (ReO) 12143-05-4, Ruthenium oxide (RuO) 12175-28-9, Dysprosium oxide (DyO) 12202-03-8, Neptunium oxide (NpO) 12280-61-4, Erbium oxide (ErO) 12281-10-6, Holmium oxide (HoO) 12281-27-5, Antimony oxide (SbO) 12281-29-7, Thulium oxide (TmO) 12296-97-8, Americium oxide (AmO) 12385-13-6, Atomic Hydrogen, properties 12401-70-6, Potassium oxide (KO) 12401-86-4, Sodium oxide (NaO) 12505-77-0, Boron oxide (BO) 12509-27-2, Rubidium oxide (RbO) 13451-17-7, Tellurium oxide (TeO) 13494-80-9, Tellurium, properties 13827-32-2, Sulfur oxide (SO) 14362-44-8, Atomic Iodine, properties 14452-66-5, Phosphorus Oxide (**PO**) 14457-64-8, Aluminum oxide (AlO) 14696-98-1, IO 14762-94-8, Atomic Fluorine, properties 14832-90-7, Selenium oxide (SeO) 14899-66-2, **Xenon** oxide (XeO) 14989-30-1, ClO 15593-23-4, Neon oxide (NeO) 15656-19-6, Bromine oxide (BrO) 16712-51-9, Helium oxide (HeO) 17778-80-2, Atomic Oxygen, properties 17778-88-0, Atomic Nitrogen, properties 19268-61-2, Polonium oxide (PoO) 20619-16-3, Germanium oxide (GeO) 21651-19-4, SnO 21908-53-2, Mercury oxide (HgO) 22537-15-1, Atomic Chlorine, properties 22537-19-5, Lawrencium, properties 23331-03-5, Thallium oxide (TlO) 24762-86-5, CmO 24774-39-8, Cesium oxide (CsO) 25578-79-4, Ytterbium oxide (YbO) 37043-69-9, Gold oxide (AuO) 49774-09-6, Einsteinium oxide (EsO) 53850-35-4, Dubnium, properties 53850-36-5, Rutherfordium, properties 54037-14-8, Bohrium, properties 54037-57-9, Hassium, properties 54038-01-6, Meitnerium, properties 54038-81-2, Seaborgium, properties 54083-77-1, Element 110 54084-26-3, Element 112 54084-70-7, Element 113 54085-16-4, Element 114 54085-64-2, Element 115 54100-71-9, Element 116 54101-14-3, Element 117 54144-19-3, Element 118 54386-24-2, Element 111 54635-27-7, Argon oxide (ArO) 54635-28-8, Krypton oxide (KrO) 59597-60-3, Actinium oxide (AcO) 60936-60-9, PaO 66170-42-1, Technetium oxide (TcO) 70424-36-1, Berkelium oxide (BkO) 87713-84-6, Rutherfordium oxide (RfO) 87713-85-7, Dubnium oxide (DbO) 99644-05-0, FmO 99644-10-7, Mendelevium oxide (MdO) 99644-16-3, Nobelium oxide (NoO) 99644-22-1, Lawrencium oxide (LrO) 113790-83-3, Californium oxide (CfO) 120066-33-3, Radon oxide (RnO) 120066-34-4, Astatine oxide (AtO) 142364-73-6, Atomic Astatine, properties 252279-61-1, Seaborgium oxide (SgO) 366493-42-7, Ununquadium oxide (UuqO) 393826-26-1, Francium oxide (FrO) 571201-43-9, Bohrium oxide (BhO) 571201-91-7, Hassium oxide (HsO) 571201-92-8, Meitnerium oxide (MtO) 571203-20-8, Darmstadtium oxide (DsO) 571203-27-5, Roentgenium

oxide (RgO) 571203-49-1, Ununbium oxide (UubO) 571203-71-9, Ununtrium oxide (UutO) 571203-75-3, Ununpentium oxide (UupO) 571203-79-7, Ununhexium oxide (UuhO) 571203-90-2, Ununseptium oxide (UusO) 571203-99-1, Ununoctium oxide (UuoO)
RL: PRP (Properties)
(optimized Slater-type basis sets for the elements 1-118 for use in scalar relativistic ZORA method)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:850924 HCAPLUS
DOCUMENT NUMBER: 135:366767
TITLE: Inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors
INVENTOR(S): Johns, Roger A.; Tao, Yuanxiang
PATENT ASSIGNEE(S): The Johns Hopkins University, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2001087285	A2	20011122	WO 2001-US15372		20010514 <--
WO 2001087285	A3	20020815			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
US 2002045590	A1	20020418	US 2001-853895		20010514 <--
US 2005119207	A1	20050602	US 2003-656140		20030908 <--
PRIORITY APPLN. INFO.:			US 2000-203894P	P	20000512 <--
			US 2000-242580P	P	20001023 <--
			US 2001-853095	A3	20010510 <--

AB PSD-95/SAP90 antisense-treated animals not only experience a significant decrease in min. alveolar concentration (MAC) for isoflurane, but also experience an attenuation in the NMDA-induced increase in isoflurane MAC. PSD-95/SAP90 appears to mediate the role of the NMDA receptor in determining the MAC of inhalational anesthetics. Suppression of the expression of PSD-95/SAP90 in the spinal cord significantly attenuates responses to painful stimuli mediated through the N-methyl-D-aspartate receptor activation. In spinal cord neurons PSD-95/SAP90 interacts with the N-methyl-D-aspartate receptor subunits 2A/2B. Activation of the N-methyl-D-aspartate receptor in spinal hyperalgesia results in association of the N-methyl-D-aspartate receptor with PSD-95/SAP90. PSD-95/SAP90 is required for hyperalgesia triggered via the N-methyl-D-aspartate receptor at the spinal cord level.
IC ICM A61K031-00
CC 1-11 (Pharmacology)

ST psd93 interaction NO synthase NMDA receptor; psd95 interaction NO synthase NMDA receptor; isoflurane min alveolar concn antisense psd95; SAP90 antisense isoflurane min alveolar concn; inhalation anesthetic NMDA receptor psd95; analgesia psd95 spinal cord; hyperalgesia spinal cord psd95

IT Glutamate receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NMDA-binding; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PSD93; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PSD95; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(SAP-102; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(SAP90; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Transcriptional regulation
(activation; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Lung
(alveolus, min. alveolar concentration; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-fos; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Brain
(cerebellum; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Brain
(cortex; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Spinal cord
(dorsal horn; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Brain
(hippocampus; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Pain
(hyperalgesia; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Inflammation
(inflammation-induced pain; inhibition of interaction of psd93 and

psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Anesthetics
(inhalation; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Analgesics
Anesthetics
Blood pressure
Drug delivery systems
Drug screening
Heart rate
Hypnotics and Sedatives
Immunoassay
Spinal cord
Yeast
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Antisense oligonucleotides
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Fusion proteins (chimeric proteins)
mRNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Drug delivery systems
(intrathecal; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Behavior
(locomotor; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Nerve, disease
(neuropathy, neuropathic pain; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Surface plasmon
(resonance; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Brain
(stem; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT Anesthesia
(threshold; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT 6384-92-5, NMDA
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT 374585-03-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT 51-79-6, Urethane 57-33-0, Sodium pentobarbitone 151-67-7, Halothane 302-17-0, **Chloral** hydrate **7440-63-3, Xenon,** biological studies 26675-46-7, Isoflurane 28523-86-6, Sevoflurane 57041-67-5, Desflurane
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT 125978-95-2, **Nitric oxide** synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(neuronal; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

IT 374665-68-6 374665-69-7 374665-70-0
RL: PRP (Properties)
(unclaimed sequence; inhibition of interaction of psd93 and psd95 with neuronal **nitric oxide** synthase and NMDA receptors)

L26 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:431619 HCAPLUS
DOCUMENT NUMBER: 135:127510
TITLE: Accurate effective potentials and virial coefficients in real fluids Part **IV**. Heterodiatomic and polyatomic substances with permanent multipoles and their mixtures with noble gases
AUTHOR(S): Eloy Ramos, J.; del Rio, Fernando; McLure, Ian A.
CORPORATE SOURCE: Departamento de Fisica, Universidad Autonoma Metropolitana Iztapalapa, Spain
SOURCE: Physical Chemistry Chemical Physics (**2001**), 3(13), 2634-2643
CODEN: PPCPFQ; ISSN: 1463-9076
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The approx. nonconformal (ANC) theory recently proposed has been very successful for determining effective interaction parameters from the measured gas imperfection B(T) for a variety of substances, from the noble gases to perfluoro-n-alkanes. Here we report the application of the ANC treatment to the polar substances: NO, CO, HCl, CO2, H2O, D2O, NH3, CH2=CH2 and SF6 and predict the cross interactions in the mixts. of these substances with noble gases. The theory is successful in describing B(T). It also permits us to extract atom-atom potential parameters for CO. The resulting C-C interaction follows the simple dependence on atomic number already found for other atoms. For NO, which is partially dimerized in the gas phase, and using the approach pioneered by Guggenheim and Scott, the ANC theory gives a very good account of the observed B(T) for partially dimerized NO. Lastly, the ANC prediction of the cross virial coefficient is in excellent agreement with experiment in all but one of the binary mixts. considered.

CC 65-6 (General Physical Chemistry)
Section cross-reference(s): 69

ST effective potential virial coeff heterodiatomic polyatomic mixt noble gas

IT Mixtures
(binary; effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)

IT Molar volume
(critical; effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT Entropy
(dissociation; effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT Dissociation enthalpy
Interatomic potential
Intermolecular potential
Second virial coefficient
(effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT Noble gases, properties
RL: PRP (Properties)
(effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT Potential energy
(effective; effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT Critical constant
(volume; effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
IT 74-85-1, Ethene, properties 124-38-9, Carbon dioxide, properties 630-08-0, Carbon monoxide, properties 2551-62-4, Sulfur fluoride (SF6) 7439-90-9, Krypton, properties 7440-01-9, Neon, properties 7440-37-1, Argon, properties 7440-59-7, Helium, properties **7440-63-3**, **Xenon**, properties 7647-01-0, Hydrogen chloride, properties 7664-41-7, Ammonia, properties 7732-18-5, Water, properties 7789-20-0, Water-d2 **10102-43-9**, **Nitric oxide**, properties
RL: PRP (Properties)
(effective potentials and virial coeffs. for heterodiat. and polyat. substances with permanent multipoles and mixts. with noble gases)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:432821 HCAPLUS
DOCUMENT NUMBER: 133:155660
TITLE: Density functionals for the strong-interaction limit
AUTHOR(S): Seidl, Michael; Perdew, John P.; Kurth, Stefan
CORPORATE SOURCE: Department of Physics and Quantum Theory Group, Tulane University, New Orleans, LA, 70118, USA
SOURCE: Physical Review A: Atomic, Molecular, and Optical Physics (**2000**), 62(1), 012502/1-012502/15
CODEN: PLRAAN; ISSN: 1050-2947
PUBLISHER: American Physical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The strong-interaction limit of d.-functional (DF) theory is simple and provides information required for an accurate resummation of DF perturbation theory. Here we derive the point-charge-plus-continuum (PC) model for that limit, and its gradient expansion. The exchange-correlation (xc) energy Exc[ρ] ∫01dαWα[ρ] follows from the xc potential energies Wα at different interaction strengths α≥0 [but at fixed d. ρ(r)]. For small

α≈0, the integrand Wα is obtained accurately from perturbation theory, but the perturbation expansion requires resummation for moderate and large α. For that purpose, we present d. functionals for the coeffs. in the asymptotic expansion Wα W∞+W∞'α-1/2 for α ∞ in the PC model. W∞PC arises from strict correlation, and W∞'PC from zero-point vibration of the electrons around their strictly correlated distributions. The PC values for W∞ and W∞' agree with those from a self-correlation-free meta-generalized gradient approximation, both for atoms and for atomization energies of mols. We also (i) explain the difference between the PC cell and the exchange-correlation hole, (ii) present a d.-functional measure of correlation strength, (iii) describe the electron localization and spin polarization energy in a highly stretched H2 mol., and (**iv**) discuss the soft-plasmon instability of the low-d. uniform electron gas.

CC 65-3 (General Physical Chemistry)

ST density functional strong interaction limit perturbation theory

IT Atomization enthalpy
Density functional theory
Electron gas
Electron localization
Exchange-correlation potential
Molecular vibration
Perturbation theory
Plasmon
(d. functionals for strong-interaction limit)

IT Noble gases, properties
RL: PRP (Properties)
(d. functionals for strong-interaction limit)

IT 74-82-8, Methane, properties 630-08-0, Carbon monoxide, properties 1333-74-0, Hydrogen, properties 2074-87-5, Cyanogen 3352-57-6, Hydroxyl, properties 7439-90-9, Krypton, properties 7439-93-2, Lithium, properties 7439-95-4, Magnesium, properties 7440-01-9, Neon, properties 7440-23-5, Sodium, properties 7440-37-1, Argon, properties 7440-41-7, Beryllium, properties 7440-59-7, Helium, properties **7440-63-3**, **Xenon**, properties 7580-67-8, Lithium hydride (LiH) 7664-39-3, Hydrogen fluoride, properties 7664-41-7, Ammonia, properties 7723-14-0, Phosphorus, properties 7727-37-9, Nitrogen, properties 7732-18-5, Water, properties 7782-41-4, Fluorine, properties 7782-44-7, Oxygen, properties 7789-24-4, Lithium fluoride (LiF), properties 10028-15-6, Ozone, properties **10102-43-9**, **Nitric oxide**, properties 12385-13-6, Hydrogen atom, properties 14452-59-6, Lithium cluster (Li2), properties 14452-60-9, Beryllium mol (Be2), properties 14452-61-0, Boron mol. (B2), properties 17778-88-0, Nitrogen atom, properties
RL: PRP (Properties)
(d. functionals for strong-interaction limit)

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:96601 HCAPLUS
DOCUMENT NUMBER: 132:262230
TITLE: Observation, identification and correction of structured molecular background by means of continuum source AAS-determination of selenium and arsenic in human urine
AUTHOR(S): Becker-Ross, Helmut; Florek, Stefan; Heitmann, Uwe
CORPORATE SOURCE: Institut fur Spektrochemie und Angewandte Spektroskopie (ISAS), Institutsteil Berlin, Berlin,

12489, Germany
SOURCE: Journal of Analytical Atomic Spectrometry (
2000), 15(2), 137-141
CODEN: JASPE2; ISSN: 0267-9477
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A high-resolution continuum source atomic absorption spectrometer based on a **xenon** short-arc lamp, a transversely heated graphite furnace module with longitudinal Zeeman option, a double echelle monochromator and a linear array CCD detector was developed. The system allows the investigation and clarification of background correction problems in conventional AAS caused by atomic and mol. interferences during the atomization of samples with complex matrixes. As an example, the determination of selenium at 196.026 nm and arsenic at 193.696 nm in undiluted human urine samples is demonstrated. The two species NO and **PO** responsible for the spectral interferences were identified and successfully corrected for by means of a math. correction algorithm. From measurements of human urine reference materials (Lyphochek Urine Metals Control Level 1 Number 69011 and Number 69041; Bio-Rad, Anaheim, CA, USA), it was found that the anal. performance of this method is comparable to that of line source AA systems. For Se the determined element concns. of 59 ± 3 and 79 ± 4 mg l-1, resp., correspond well with the certified values of 61 ± 12 and 73 ± 14 mg l-1, for the LOD and the reproducibility values of 38 pg in the matrix and 3.5% were obtained, resp. In the case of As, only NaCl and **PO** produced mol. structures and were corrected for. Again the measured concentration of 168 ± 6 mg l-1 lies in the acceptable range of 154 ± 31 mg l-1 given for the reference sample (Lyphochek Urine Metals Control Level 2 Number 69012; Bio-Rad) and the LOD was found to be 25 pg in presence of the undiluted human urine matrix.

CC 9-3 (Biochemical Methods)
ST urine selenium arsenic detn AAS; atomic absorption spectrometry selenium arsenic
IT Atomic absorption spectrometry
(continuum source; selenium and arsenic determination in human urine by continuum source atomic absorption spectrometry)
IT Urine
Urine analysis
(selenium and arsenic determination in human urine by continuum source atomic absorption spectrometry)
IT **10102-43-9**, **Nitric oxide**, analysis
14452-66-5, Phosphorus oxide (**PO**)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(interferent; selenium and arsenic determination in human urine by continuum source atomic absorption spectrometry)
IT 7440-38-2, Arsenic, analysis 7782-49-2, Selenium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(selenium and arsenic determination in human urine by continuum source atomic absorption spectrometry)
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:486905 HCAPLUS
DOCUMENT NUMBER: 131:146499

TITLE: Snapshot absorption spectroscopy
AUTHOR(S): Homan, B. E.; Vanderhoff, J. A.
CORPORATE SOURCE: U.S. Army Research Laboratory, Aberdeen Proving Ground, MD, 21005, USA
SOURCE: Applied Spectroscopy (**1999**), 53(7), 816-821
CODEN: APSPA4; ISSN: 0003-7028
PUBLISHER: Society for Applied Spectroscopy
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Exptl. improvements were made in the UV-visible absorption spectroscopy technique applied to propellant flame diagnostics. The two-dimensional feature of an intensified charge-coupled device (CCD) detector was used to simultaneously record multiple, spatially distinct absorption spectra over a region of 0.35 cm. **Temporal** resolution was increased to 1 ms by pulsing a simmering **xenon** arc lamp. The resulting increase in light intensity by 30-70 times over the nonpulsed output provides the necessary light flux to achieve single-pulse, multiple absorption spectra. Species with low concns. can be measured with the inclusion of multiple-pass optics to increase the effective pathlength through the combustion region. Due to broadband UV-visible absorption observed in propellant flame spectra, typically only 20% of the incident light is transmitted. However, inclusion of a neutral-d. filter during the measurement of the incident intensity increased the effective dynamic range of the detector by a factor of 5. With these improvements, temperature and OH and NO concentration maps, with 1 ms **temporal** resolution, were determined with two different propellant flames (XM39 and JA2).

CC 50-5 (Propellants and Explosives)
Section cross-reference(s): 73

ST pulsed laser UV absorption propellant combustion; charge coupled device pulsed UV laser propellant combustion

IT Laser spectroscopy
Laser spectroscopy
(UV-visible; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT Propellants (fuels)
(gun, low-vulnerability; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT UV and visible spectroscopy
UV and visible spectroscopy
(laser; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT Propellants (fuels)
(solid, flame; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT Combustion
Flame
(species and temperature profiles in; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT 3352-57-6, Hydroxyl, processes **10102-43-9**, **Nitric oxide**, processes
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(profile of; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

IT 123424-21-5, JA 2 130939-56-9, XM-39
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(propellant; pulsed laser UV-visible absorption spectroscopy for high-resolution propellant flame diagnostics)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:454282 HCAPLUS
DOCUMENT NUMBER: 131:85145
TITLE: Method of magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times
INVENTOR(S): Ardenkjaer-Larsen, Jan Henrik; Axelsson, Oskar; Golman, Klaes; Wistrand, Lars-Goran; Hansson, Georg; Leunbach, Ib; Petersson, Stefan
PATENT ASSIGNEE(S): Nycomed Imaging AS, Norway; Cockbain, Julian
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9935508	A1	19990715	WO 1998-GB3904	19981223 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2317526	AA	19990715	CA 1998-2317526	19981223 <--
AU 9917753	A1	19990726	AU 1999-17753	19981223 <--
AU 752308	B2	20020912		
BR 9813244	A	20001010	BR 1998-13244	19981223 <--
EP 1046051	A1	20001025	EP 1998-962629	19981223 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002501006	T2	20020115	JP 2000-527838	19981223 <--
NZ 505151	A	20021126	NZ 1998-505151	19981223 <--
RU 2221255	C2	20040110	RU 2000-120670	19981223 <--
CN 1527066	A	20040908	CN 2003-10113142	19981223 <--
NO 2000003251	A	20000622	NO 2000-3251	20000622 <--

PRIORITY APPLN. INFO.:	GB 1998-158	A	19980105 <--
	US 1998-76924P	P	19980305 <--
	GB 1998-13795	A	19980625 <--
	WO 1998-GB3904	W	19981223 <--

AB This invention provides a method of magnetic resonance investigation of a sample, preferably of a human or non-human animal body, said method comprising: (i) producing a hyperpolarized solution of a high T1 agent by dissolving in a physiol. tolerable solvent a hyperpolarized solid sample of said high T1 agent; (ii) where the hyperpolarization of the solid sample of said high T1 agent in step (i) is effected by means of a polarizing agent, optionally separating the whole, substantially the whole, or a portion of said polarizing agent from said high T1 agent; (iii) administering said hyperpolarized solution to said sample; (**iv**) exposing said sample to a second radiation of a frequency selected to excite nuclear spin transitions in selected nuclei e.g. the MR imaging nuclei of the high T1 agent; (v) detecting magnetic resonance signals from said sample; and (vi) optionally, generating an image, dynamic flow data, diffusion data, perfusion data, physiol. data (e.g. pH, pO2, pCO2, temperature

or ionic concns.) or metabolic data from said detected signals, wherein said high T1 agent in said hyperpolarized solution has a T1 value (at a field strength in the range 0.01-5T and a temperature in the range 20-40 °C) of at least 5 s. A sample of solid 1-13C-2,2,2',2',2",2"-hexadeuterotris(hydroxymethyl)nitromethane was subjected to a low-field pumping procedure and then moved to a holding field of 0.4 T and added to deuterium oxide at 40° and stirred by nitrogen bubbling. The solution was analyzed by 13C-NMR spectroscopy. An enhancement factor of 12 was found.

IC G01R033-28

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 63, 77

ST magnetic resonance imaging hyperpolarization long spin relaxation; MRI contrast agent spin relaxation hyperpolarization

IT Imaging agents
(NMR contrast; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Imaging
(NMR; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Blood plasma
(T1 values for carbon-13 atom in compds.; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Drug delivery systems
(carriers; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Temperature
(cold, magnetic field and, in retention of spin polarization during transportation; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Gases
(hyperpolarized, as polarizing agent; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Noble gases, uses
RL: NUU (Other use, unclassified); USES (Uses)
(hyperpolarized, as polarizing agent; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Magnetic field
(low temperature and, in retention of spin polarization during transportation; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT Hyperpolarizability
Magnetic relaxation
Spin polarization
(magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT 230283-73-5 230283-75-7
RL: PRP (Properties)
(T1 values for carbon-13 atom in; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT 16873-17-9, Deuterium atom, properties
RL: PRP (Properties)
(agent with long T1 relaxation time labeled with; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)

IT 7782-44-7, Oxygen, uses **10102-43-9**, Nitrogen oxide (NO), uses
RL: NUU (Other use, unclassified); USES (Uses)
(as material with unpaired electrons for agent treatment at low temperature; magnetic resonance investigation using ex vivo hyperpolarized agents

with long T1 relaxation times)
IT 7723-14-0, Phosphorus-31, properties 12184-88-2, Hydride 14304-87-1, Silicon-29, properties 14390-96-6, Nitrogen-15, properties 14762-74-4, Carbon-13, properties 14762-94-8, Fluorine atom, properties
RL: PRP (Properties)
(as nuclei with long T1 relaxation time; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(as solvent; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
IT 7440-59-7, Helium, uses **7440-63-3, Xenon**, uses 13965-99-6, 129Xe, uses 14762-55-1, uses
RL: NUU (Other use, unclassified); USES (Uses)
(hyperpolarized, as polarizing agent; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
IT 7789-20-0, Deuterium oxide
RL: NUU (Other use, unclassified); USES (Uses)
(in enhancement of 13C compds.; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
IT 2216-49-1, Trityl 13408-29-2, Nitroxide 14280-17-2, Cr 5+, uses
RL: NUU (Other use, unclassified); USES (Uses)
(polarizing agent containing; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
IT 230283-74-6
RL: PRP (Properties)
(13C-NMR spectrum of; magnetic resonance investigation using ex vivo hyperpolarized agents with long T1 relaxation times)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:766507 HCAPLUS
DOCUMENT NUMBER: 130:29221
TITLE: Preparation of solid porous matrixes for pharmaceutical uses
INVENTOR(S): Unger, Evan C.
PATENT ASSIGNEE(S): ImaRx Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9851282	A1	19981119	WO 1998-US9570		19980512 <--
W: AU, BR, CA, CN, JP, KR, NZ					
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
US 2002039594	A1	20020404	US 1998-75477		19980511 <--
AU 9873787	A1	19981208	AU 1998-73787		19980512 <--
EP 983060	A1	20000308	EP 1998-921109		19980512 <--
R: DE, FR, GB, IT, NL					
US 2001018072	A1	20010830	US 2001-828762		20010409 <--
US 2004091541	A1	20040513	US 2003-622027		20030716 <--
PRIORITY APPLN. INFO.:			US 1997-46379P	P	19970513 <--
			US 1998-75477	A	19980511 <--

WO 1998-US9570 W 19980512 <--
US 2001-828762 B1 20010409 <--

AB A solid porous matrix formed from a surfactant, a solvent, and a bioactive agent is described. Thus, amphotericin nanoparticles were prepared by using ZrO2 beads and a surfactant. The mixture was milled for 24 h.

IC ICM A61K009-10

CC 63-6 (Pharmaceuticals)

ST solid porous matrix pharmaceutical surfactant

IT Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(A; preparation of solid porous matrixes for pharmaceutical uses)

IT Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(G; preparation of solid porous matrixes for pharmaceutical uses)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GPIIBIIIa; preparation of solid porous matrixes for pharmaceutical uses)

IT Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(M; preparation of solid porous matrixes for pharmaceutical uses)

IT Macrophage
(activation factor; preparation of solid porous matrixes for pharmaceutical uses)

IT Steroids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acyl; preparation of solid porous matrixes for pharmaceutical uses)

IT Quaternary ammonium compounds, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; preparation of solid porous matrixes for pharmaceutical uses)

IT Estrogens
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiestrogens; preparation of solid porous matrixes for pharmaceutical uses)

IT Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclic; preparation of solid porous matrixes for pharmaceutical uses)

IT Eye, disease
(diabetic retinopathy; preparation of solid porous matrixes for pharmaceutical uses)

IT Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diethers; preparation of solid porous matrixes for pharmaceutical uses)

IT Natural products, pharmaceutical
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(digitalis; preparation of solid porous matrixes for pharmaceutical uses)

IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dilactone-based; preparation of solid porous matrixes for pharmaceutical uses)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(endotoxins; preparation of solid porous matrixes for pharmaceutical uses)

IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ethers; preparation of solid porous matrixes for pharmaceutical uses)

IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based; preparation of solid porous matrixes for pharmaceutical uses)

IT Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methoxyl; preparation of solid porous matrixes for pharmaceutical uses)
IT Drug delivery systems
(microparticles; preparation of solid porous matrixes for pharmaceutical uses)
IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal; preparation of solid porous matrixes for pharmaceutical uses)
IT Drug delivery systems
(nanoparticles; preparation of solid porous matrixes for pharmaceutical uses)
IT Surfactants
(nonionic; preparation of solid porous matrixes for pharmaceutical uses)
IT Natural products, pharmaceutical
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(opium; preparation of solid porous matrixes for pharmaceutical uses)
IT Polyethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-containing; preparation of solid porous matrixes for pharmaceutical uses)
IT Perfluoro compounds
Perfluoro compounds
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(perfluoroalkyl ethers; preparation of solid porous matrixes for pharmaceutical uses)
IT Ethers, biological studies
Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(perfluoroalkyl; preparation of solid porous matrixes for pharmaceutical uses)
IT Allergy inhibitors
Anesthetics
Anti-inflammatory agents
Antianginal agents
Antibiotics
Anticoagulants
Antirheumatic agents
Antitumor agents
Antiviral agents
Blood products
Coryneform bacteria
Drug delivery systems
Fungicides
Hypnotics and Sedatives
Mycobacterium
Narcotics
Neuromuscular blocking agents
Preservatives
Protozoacides
Tuberculostatics
(preparation of solid porous matrixes for pharmaceutical uses)
IT Ligands
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Albumins, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Canola oil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of solid porous matrixes for pharmaceutical uses)
IT Carbohydrates, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Collagens, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Corn oil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Crown ethers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Elastins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Enkephalins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Enzymes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Fibrins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Glycosides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Integrins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 1
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 10
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 11
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 12
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 2
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 3
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 5
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 6
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 7
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 8
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukin 9
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interleukins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Lipids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Lipopolysaccharides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Lymphokines
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Lymphotoxin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Olive oil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Peanut oil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Peptides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Perfluorocarbons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Platelet-derived growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Polyethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Polymers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Polyphosphazenes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Porphyrins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of solid porous matrixes for pharmaceutical uses)
IT Prostaglandins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Proteins, general, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Retinoids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Ricins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Safflower oil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Terpenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Transforming growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Tumor necrosis factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Vitamins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-2a; preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-2b; preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; preparation of solid porous matrixes for pharmaceutical uses)
IT Lactams
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β-, antibiotics; preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β; preparation of solid porous matrixes for pharmaceutical uses)
IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ; preparation of solid porous matrixes for pharmaceutical uses)
IT 101479-70-3, Adaprolol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Adaprolol; preparation of solid porous matrixes for pharmaceutical uses)
IT 64228-81-5, Atracurium besilate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Atracurium besilate; preparation of solid porous matrixes for pharmaceutical uses)
IT 50-07-7, Mitomycin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Mitomycin; preparation of solid porous matrixes for pharmaceutical uses)
IT 9015-82-1 9028-31-3, Aldose reductase 125978-95-2, **Nitric oxide** synthase
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; preparation of solid porous matrixes for pharmaceutical uses)
IT 9081-34-9, 5α-Reductase
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibitors; preparation of solid porous matrixes for pharmaceutical uses)
IT 9031-44-1, Kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ligands for metalloprotein; preparation of solid porous matrixes for pharmaceutical uses)
IT 9054-89-1, Superoxide dismutase
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(manganese-dependent; preparation of solid porous matrixes for pharmaceutical uses)
IT 9001-12-1, Collagenase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of solid porous matrixes for pharmaceutical uses)
IT 591-93-5P, 1,4-Pentadiene 216245-34-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT 50-02-2, Dexamethasone 50-03-3, Hydrocortisone acetate 50-04-4, Cortisone acetate 50-23-7 50-24-8, Prednisolone 50-28-2, Estra-1,3,5(10)-triene-3,17-diol (17β)-, biological studies 50-33-9, Phenylbutazone, biological studies 50-44-2, Mercaptopurine 50-67-9, 5-Hydroxytryptamine, biological studies 50-76-0, Dactinomycin 50-78-2, Aspirin 50-99-7, D-Glucose, biological studies 51-05-8, Procaine hydrochloride 51-61-6, Dopamine, biological studies 52-21-1, Prednisolone acetate 52-53-9, Verapamil 52-67-5, Penicillamine 52-86-8, Haloperidol 53-02-1 53-03-2, Prednisone 53-19-0, Mitotane 53-36-1, Methylprednisolone acetate 53-41-8D, Androsterone, aza derivs. 53-86-1, Indomethacin 54-05-7, Chloroquine 54-85-3, Isoniazid 55-63-0, Nitroglycerin 55-98-1, Busulfan 56-75-7, Chloramphenicol 56-81-5, 1,2,3-Propanetriol, biological studies 57-09-0, Cetyltrimethylammonium bromide 57-22-7, Vincristine 57-27-2, Morphine, biological studies 57-30-7, Phenobarbital sodium 57-33-0, Pentobarbital sodium 57-43-2, Amobarbital 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, 1,2-Propanediol, biological studies 57-83-0, Progesterone, biological studies 57-94-3, Tubocurarine chloride 58-22-0, Testosterone 58-32-2, Dipyridamole 58-82-2, Bradykinin 59-02-9, α-Tocopherol 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 59-30-3, Folic acid, biological studies 60-54-8, Tetracycline 61-32-5, Methicillin 61-33-6, biological studies 61-68-7, Mefenamic acid 64-43-7, Amobarbital sodium 65-29-2, Gallamine triethiodide 65-49-6, Para-aminosalicylic acid 66-79-5, Oxacillin 67-56-1, Methanol, biological studies 67-78-7, Triamcinolone diacetate 67-97-0, Cholecalciferol 68-41-7, Cycloserine 69-53-4, Ampicillin 69-72-7D, Salicylic acid, esters 70-18-8, Glutathione, biological studies 71-27-2, Succinylcholine chloride 71-63-6, Digitoxin 71-73-8, Thiopental sodium 73-78-9, Lidocaine hydrochloride 74-82-8, Methane, biological studies 74-99-7, Propyne 75-00-3, Chloroethane 75-10-5, Difluoromethane 75-18-3, Methyl sulfide 75-19-4, Cyclopropane 75-29-6, Propane-2-chloro 75-31-0, 2-AminoPropane, biological studies 75-34-3, 1,1-Dichloroethane 75-35-4, 1,1-Dichloroethylene, biological studies 75-43-4, Dichlorofluoromethane 75-45-6, Chlorodifluoromethane 75-46-7, TriFluoromethane 75-56-9, biological studies 75-61-6, Dibromodifluoromethane 75-63-8, Bromotrifluoromethane 75-69-4, Trichlorofluoromethane 75-71-8, Dichlorodifluoromethane 75-72-9, Chlorotrifluoromethane 75-73-0 76-13-1, 1,1,2-Trichloro-1,2,2-Trifluoroethane 76-15-3, 1-Chloro-1,1,2,2,2-Pentafluoroethane 76-16-4, HexaFluoroethane 76-19-7, Octafluoropropane 76-25-5, Triamcinolone

acetonide 76-57-3, Codeine 76-74-4, Pentobarbital 76-99-3, Methadone 77-02-1, Aprobarbital 77-21-4, Glutethimide 78-11-5, Pentaerythritol tetranitrate 78-78-4, 2-Methylbutane 78-79-5, 2-Methyl-1,3-Butadiene, biological studies 78-80-8, 2-Methyl-1-Buten-3-yne 79-10-7D, Acrylic acid, esters, polymers 79-17-4, Hydrazinecarboximidamide 80-08-0, Dapsone 83-43-2, Methylprednisolone 87-33-2, Isosorbide dinitrate 92-13-7, Pilocarpine 95-80-7, 2,4-Diaminotoluene 96-40-2, 3-Chloro-cyclopentene 96-49-1, 1,3-Dioxolan-2-one 98-96-4, Pyrazinamide 99-20-7, Trehalose 103-90-2, Acetaminophen 106-98-9, 1-Butene, biological studies 106-99-0, 1,3-Butadiene, biological studies 107-00-6, 1-Butyne 107-01-7, 2-Butene 107-25-5, Methyl vinyl ether 109-66-0, n-Pentane, biological studies 109-67-1, 1-Pentene 109-92-2 109-93-3, Vinyl ether 111-02-4, Squalene 113-18-8, Ethchlorvynol 114-07-8, Erythromycin 115-07-1, 1-Propene, biological studies 115-10-6, Methyl ether 115-25-3, OctafluoroCyclobutane 115-44-6, Talbutal 116-15-4, Hexafluoropropylene 118-42-3, Hydroxychloroquine 122-18-9, Benzyldimethylhexadecylammonium chloride 122-57-6 123-03-5, Cetylpyridinium chloride 123-63-7, Paraldehyde 124-03-8, Cetyldimethylethylammonium bromide 124-40-3, Dimethylamine, biological studies 124-94-7, Triamcinolone 125-02-0, Prednisolone sodium phosphate 125-04-2, Hydrocortisone sodium succinate 125-64-4, Methyprylon 125-84-8, Aminoglutethimide 126-07-8, Griseofulvin 126-52-3, Ethinamate 129-20-4, Oxyphenbutazone 130-15-4, 1,4-Naphthalenedione 130-95-0, Quinine 133-51-7, Meglumine antimonate 135-16-0 136-47-0, Tetracaine hydrochloride 139-07-1, Benzyldimethyldodecylammonium chloride 139-08-2, Benzyldimethyltetradecylammonium chloride 140-72-7, Cetylpyridinium bromide 143-67-9, Vinblastine sulfate 143-81-7, Butabarbital sodium 147-52-4, Nafcillin 147-94-4, Cytosine arabinoside 148-82-3, Melphalan 151-73-5, Betamethasone sodium phosphate 154-21-2, Lincomycin 287-23-0, Cyclobutane 302-17-0, **Chloral** hydrate 305-03-3 307-34-6, Perfluorooctane 307-45-9, Perfluorodecane 309-36-4, Methohexital sodium 309-43-3, Secobarbital sodium 317-52-2, Hexafluorenium bromide 334-99-6, NitrosotriFluoromethane 335-02-4, NitrotriFluoromethane 335-05-7, Trifluoromethanesulfonyl fluoride 335-57-9, Perfluoroheptane 338-65-8, 2-Chloro-1,1-Difluoroethane 350-51-6, 3-Fluorostyrene 353-36-6, Fluoroethane 353-85-5, Trifluoroacetonitrile 353-87-7, BromodifluoronitrosoMethane 354-72-3, Nitrosopentafluoroethane 354-80-3, Perfluoroethylamine 354-81-4, Nitropentafluoroethane 355-25-9, Decafluorobutane 355-42-0, Perfluorohexane 355-79-3, Perfluorotetrahydropyran 357-26-6, Perfluoro-1-Butene 359-35-3, 1,1,2,2-Tetrafluoroethane 360-89-4, Octafluoro-2-butene 366-70-1, Procarbazine-hydrochloride 371-67-5, 1,1,1-Trifluoro-diazoethane 371-77-7 371-78-8, Trifluoromethyl sulfide 373-52-4, Bromofluoromethane 374-07-2, 1,1-Dichloro-1,2,2,2-Tetrafluoroethane 375-96-2, Perfluorononane 376-87-4, Perfluoro-1-pentene 378-44-9, Betamethasone 420-45-1, Propane-2,2-difluoro 420-46-2, 1,1,1-Trifluoroethane 421-17-0, Trifluoromethanesulfenylchloride 421-83-0, Trifluoromethanesulfonyl chloride 423-26-7 423-33-6 435-97-2, Phenprocoumon 443-48-1, Metronidazole 460-12-8, Diacetylene 461-68-7, TetrafluoroAllene 463-49-0, Allene 463-58-1, Carbonyl sulfide 463-82-1, Neopentane 503-17-3, 2-Butyne 508-99-6, Hydrocortisone cypionate 514-36-3, Fludrocortisone acetate 525-66-6 536-33-4, Ethionamide 547-64-8, Methyl lactate 548-73-2, Droperidol 557-98-2, 2-Chloropropylene 559-40-0, Octafluorocyclopentene 561-27-3, Heroin 563-45-1, 3-Methyl-1-Butene 563-46-2, 2-Methyl-1-Butene 582-24-1D, Benzoylcarbinol, salts 590-19-2, 1,2-Butadiene 590-21-6, 1-ChloroPropylene 593-53-3, Fluoromethane 593-70-4, Chlorofluoromethane 593-98-6, Bromochlorofluoromethane 594-11-6,

MEthylCyclopropane 595-33-5, Megestrol acetate 598-23-2,
3-Methyl-1-Butyne 598-53-8, Methyl isopropyl ether 598-56-1
598-61-8, MethylCyclobutane 624-72-6, 1,2-Difluoroethane 624-91-9,
Methyl nitrite 625-04-7, 2-Pentanone-4-amino-4-methyl 627-20-3,
cis-2-Pentene 632-58-6, Phthalic acid-tetrachloro
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)

IT 644-62-2 646-04-8, trans-2-Pentene 661-54-1, Propyne-3,3,3-trifluoro
661-97-2 677-56-5, Propane-1,1,1,2,2,3-hexafluoro 678-26-2,
Perfluoropentane 684-16-2, Hexafluoroacetone 685-63-2,
Hexafluoro-1,3-butadiene 689-97-4, Vinyl acetylene 692-50-2,
Hexafluoro-2-butyne 752-61-4, Digitalin 768-94-5, Amantadine
818-92-8, 3-FluoroPropylene 846-50-4, Temazepam 921-13-1,
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990-73-8, Fentanyl citrate 1070-11-7, Ethambutol hydrochloride
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1397-89-3, Amphotericin B 1400-61-9, Nystatin 1404-04-2, Neomycin
1405-37-4, Capreomycin sulfate 1493-03-4, Difluoroiodomethane
1597-82-6, Paramethasone acetate 1630-94-0, 1,1-DimethylCyclopropane
1691-13-0, 1,2-Difluoroethylene 1722-62-9, Mepivacaine hydrochloride
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2366-52-1, 1-Fluorobutane 2375-03-3, Methylprednisolone sodium succinate
2392-39-4, Dexamethasone sodium phosphate 2511-95-7,
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hydrochloride 4428-95-9, Foscarnet 4431-00-9, Aurintricarboxylic acid
4697-36-3, Carbenicillin 4786-20-3, Crotononitrile 4901-75-1,
3-Ethyl-3-methyldiaziridine 5534-09-8, Beclomethasone dipropionate
5536-17-4, Arabinosyl adenine 5611-51-8, Triamcinolone hexacetonide
5714-22-7, Sulfur fluoride (S2F10) 6000-74-4, Hydrocortisone sodium
phosphate 7281-04-1, Benzyldimethyldodecylammonium bromide 7297-25-8,
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7440-48-4, Cobalt, biological studies **7440-63-3**, **Xenon**
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Metocurine iodide 7637-07-2, biological studies 7647-14-5, Sodium
chloride, biological studies 7681-14-3, Prednisolone tebutate
7727-37-9, Nitrogen, biological studies 7728-73-6 7782-41-4, Fluorine,
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Growth hormone 9002-79-3, Melanocyte stimulating hormone 9002-89-5,
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Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-67-5,
Methyl Cellulose 9005-25-8, Starch, biological studies 9005-27-0,
HETA-starch 9005-32-7, Alginic acid 9005-49-6, Heparin, biological
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Polyoxyethylene sorbitan monooleate 9005-66-7, Polyoxyethylene sorbitan
monopalmitate 9005-67-8, Polyoxyethylene sorbitan monostearate

9005-71-4, Polyoxyethylene sorbitan tristearate 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9011-14-7, PMMA 9011-97-6, Cholecystokinin 9015-68-3, Asparaginase 9015-71-8, Corticotropin releasing factor 9036-19-5, Octoxynol 9039-53-6, Urokinase 9061-61-4, Nerve growth factor 10024-97-2, Nitrogen oxide (N2O), biological studies 11000-17-2, Vasopressin 11056-06-7, Bleomycin 11096-26-7, Erythropoietin 13264-41-0, Cetyldimethylethylammonium chloride 13292-46-1, Rifampin 13311-84-7, Flutamide 13647-35-3, Trilostane 15500-66-0, Pancuronium bromide 15663-27-1, Cisplatin 15686-71-2, Cephalexin 15687-27-1, Ibuprofen 16009-13-5, Hemin 16136-85-9 17598-65-1, Deslanoside 18010-40-7, Bupivacaine hydrochloride 18323-44-9, Clindamycin 18378-89-7, Plicamycin 18773-88-1, Benzyldimethyltetradecylammonium bromide 20187-55-7, Bendazac 20274-91-3 20830-75-5, Digoxin 21829-25-4, Nifedipine 22204-53-1, Naproxen 22494-42-4, Diflunisal 22916-47-8, Miconazole 23110-15-8, Fumagillin 23541-50-6, Daunorubicin hydrochloride 24356-66-9 24764-97-4, 2-Bromobutyraldehyde 24991-23-9 25104-18-1, Polylysine 25151-81-9, Prostanoic acid 25316-40-9, Adriamycin 25322-68-3 25322-68-3D, PEG, ethers 25322-69-4, Polypropylene glycol 25513-46-6, Polyglutamic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 26171-23-3, Tolmetin 26780-50-7, Glycolide-lactide copolymer 26787-78-0, Amoxicillin 26839-75-8, Timolol 28911-01-5, Triazolam 29121-60-6, Vaninolol 29767-20-2, Teniposide 30516-87-1, Azidothymidine 31637-97-5, Etofibrate 33069-62-4, Taxol 33125-97-2, Etomidate 33419-42-0, Etoposide 33507-63-0, Substance p 34077-87-7, DiChlorotrifluoroethane 34787-01-4, Ticarcillin 36322-90-4 36637-19-1, Etidocaine hydrochloride 36791-04-5, Ribavirin 38000-06-5, Polylysine 38194-50-2, Sulindac 38821-53-3, Cephradine 39391-18-9, Cyclooxygenase 41575-94-4, Carboplatin 42399-41-7, Diltiazem 47141-42-4, Levobunolol 50370-12-2, Cefadroxil 50402-72-7, Piperidine-2,3,6-trimethyl 50700-72-6, Vecuronium bromide 50972-17-3, Bacampicillin 51264-14-3, Amsacrine 52205-73-9, Estramustine phosphate sodium 52365-63-6, Dipivefrin 53045-71-9, 1-Pentene-3-bromo 53188-07-1, Trolox 53678-77-6, Muramyldipeptide 53994-73-3, Cefaclor 54965-24-1, Tamoxifen citrate 55142-85-3, Ticlopidine 57223-18-4, 1-Nonen-3-yne 59277-89-3, Acyclovir 59467-96-8, Midazolam hydrochloride 60118-07-2, Endorphin 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 62232-46-6, Bifemelane hydrochloride 62571-86-2, Captopril 62683-29-8, Colony stimulating factor 63659-18-7, Betaxolol 65277-42-1, Ketoconazole 68302-57-8 68367-52-2, Sorbinil 69279-90-9, Ansamitocin 72702-95-5, Ponalrestat 73218-79-8, Apraclonidine hydrochloride 73984-11-9 74381-53-6, Leuprolide acetate 74790-08-2, Spiroplatin 75847-73-3, Enalapril 76547-98-3, Lisinopril 77181-69-2, Sorivudine 80755-87-9 81486-22-8, Nipradilol 82159-09-9, Epalrestat 82410-32-0, Ganciclovir 82964-04-3, Tolrestat 83869-56-1, Granulocyte macrophage colony stimulating factor 86090-08-6, Angiostatin 88096-12-2 89149-10-0, 15-Deoxyspergualin 98023-09-7 99896-85-2 106956-32-5, Oncostatin M 113852-37-2, Cidofovir 116632-15-6, 1.2.3-Nonadecanetricarboxylic acid 2-hydroxytrimethylester 119813-10-4, Carzelesin 120279-96-1, Dorzolamide 120287-85-6D, Cetrorelix, derivs. 121181-53-1, Filgrastim
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)

IT 124389-07-7, Muramyltripeptide 127464-60-2, Vascular endothelial growth factor 127984-74-1, Somatuline 130209-82-4, Latanoprost 139639-23-9, Tissue plasminogen activator 141436-78-4, Protein kinase c 143011-72-7, Granulocyte colony stimulating factor 148717-90-2, Squalamine 163702-07-6 169939-94-0, LY333531 216245-16-8 216245-28-2 216245-32-8 216382-88-6, Imidazopyridine 216441-58-6,

Lecosim
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of solid porous matrixes for pharmaceutical uses)
IT 9001-92-7, Protease
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(receptors; preparation of solid porous matrixes for pharmaceutical uses)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ACCESSION NUMBER: 1998:125098 HCAPLUS
DOCUMENT NUMBER: 129:59114
TITLE: Adsorbate-induced global and local expansions and contractions of a close-packed transition metal surface
AUTHOR(S): Menzel, Dietrich
CORPORATE SOURCE: Physik-Department E 20, Techn. Universitaet Muenchen, Garching, D-85747, Germany
SOURCE: Surface Review and Letters (**1997**), 4(6), 1283-1289
CODEN: SRLEFH; ISSN: 0218-625X
PUBLISHER: World Scientific Publishing Co. Pte. Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB For over 20 adsorbate and coadsorbate systems on Ru(0001), the changes of the distance between the first and the second metal layer, d12, are compared. These are taken from geometrical structures which, except for very stable (O, S and Cs) layers, have been determined using a LEED data acquisition system based on a slow scan CCD camera, constructed to minimize the total dose necessary for the accumulation of full **IV** data without radiation damage. The reproducibility is such that a relative accuracy of d12 of better than 0.02 Å is likely. For the overall (center of mass) changes of d12, it was found that in most cases the sign of the change can be correlated with the character of the adsorbate: electroneg. adsorbates tend to increase d12, while electropos. or strongly polarizable adsorbates such as noble gases lead to a further contraction beyond that seen for the clean surface (-2.5%). The local changes of d12 are very complex and corroborate the view that even the close-packed surface of a highly refractory metal responds very flexibly to the local electron rearrangement caused by the bonding of adsorbates. Some existing ideas and arguments directed at a conceptual understanding of the observed changes are discussed.
CC 66-3 (Surface Chemistry and Colloids)
Section cross-reference(s): 65
ST adsorbate coadsorbate surface structure ruthenium; close packed transition metal expansion contraction
IT Surface structure
(adsorbate-induced global and local expansions and contractions of a close-packed Ru(0001) surface)
IT Adsorbed substances
(coadsorbates; adsorbate-induced global and local expansions and contractions of a close-packed Ru(0001) surface)
IT 71-43-2, Benzene, properties 630-08-0, Carbon monoxide, properties 7439-90-9, Krypton, properties 7440-17-7, Rubidium, properties 7440-18-8, Ruthenium, properties 7440-23-5, Sodium, properties 7440-46-2, Cesium, properties **7440-63-3, Xenon,** properties 7704-34-9, Sulfur, properties 7732-18-5, Water, properties **10102-43-9, Nitric oxide,** NO, properties 17778-80-2, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)
(adsorbate-induced global and local expansions and contractions of a close-packed Ru(0001) surface)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:65820 HCAPLUS
DOCUMENT NUMBER: 128:123808
TITLE: **Nitric oxide** inhalation for the prophylaxis and treatment of inflammatory response following extracorporeal blood circulation
INVENTOR(S): Blaise, Gilbert
PATENT ASSIGNEE(S): Institut du N.O. Inc., Can.; Blaise, Gilbert
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9801142	A1	19980115	WO 1997-CA428	19970618 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2180506	C	20031125	CA 1996-2180506	19960704
AU 9730860	A1	19980202	AU 1997-30860	19970618 <--
EP 910391	A1	19990428	EP 1997-925805	19970618 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: CA 1996-2180506 A 19960704 <--
WO 1997-CA428 W 19970618 <--

AB The use of **nitric oxide** as a gaseous drug for preventing or controlling inflammatory response following extracorporeal blood circulation in humans and animals is disclosed. The gaseous drug is preferably inhaled and delivered to a human or animal by **oral** or nasal intubation, during at least part of the pre-operative preparation period, during the operation itself, and during part of the post-operative recovery period. The drug is preferably administered at a concentration of 0.5-80 ppm. The use of **nitric oxide** is also intended to protect the renal, pulmonary, hepatic and neurol. functions following extracorporeal blood circulation, and to cause relaxation of the left ventricle of the cardiac muscle.

IC ICM A61K033-00
CC 1-7 (Pharmacology)
ST **nitric oxide** inhalation antiinflammatory extracorporeal circulation
IT Cytoprotective agents
(cardioprotective; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Circulation
(extracorporeal; **nitric oxide** inhalation for

prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Intestine
Kidney
Lung
(function, preservation of; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Cytoprotective agents
(hepatoprotectants; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Drug delivery systems
(inhalants; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Heart
(left ventricle, relaxation; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Cytoprotective agents
(neuroprotectants; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT Anti-inflammatory agents
Blood pressure
Hypoxia, animal
Surgery
Vasodilators
(**nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT 124-38-9, Carbon dioxide, biological studies 7439-90-9, Krypton, biological studies 7440-37-1, Argon, biological studies 7440-59-7, Helium, biological studies **7440-63-3**, **Xenon**, biological studies 7727-37-9, Nitrogen, biological studies 7782-44-7, Oxygen, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gas mixture with **nitric oxide** and; **nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
IT **10102-43-9**, **Nitric oxide**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**nitric oxide** inhalation for prophylaxis and treatment of inflammatory response following extracorporeal blood circulation)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:370863 HCAPLUS
DOCUMENT NUMBER: 127:54977
TITLE: Spectroscopic characterization of dealuminated H-mordenites: the role of different aluminum species on the SCR of NO with methane
AUTHOR(S): Lezcano, M.; Ribotta, A.; Miro, E.; Lombardo, E.; Petunchi, J.; Moreaux, C.; Dereppe, J. M.
CORPORATE SOURCE: Instituto Investigaciones Catalisis Petroquimica,

INCAPE (FIQ, UNL-CONICET), Santa Fe, 3000, Argent.
SOURCE: Journal of Catalysis (**1997**), 168(2), 511-521
CODEN: JCTLA5; ISSN: 0021-9517
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In order to understand the role of different aluminum species in the selective catalytic reduction of nitrogen oxides by methane over H-mordenites, solids with varying Si/Al ratios (5.9-16.9) were prepared by acid leaching. They were thoroughly characterized before and after leaching. The distribution of Al was determined through 27Al MAS NMR. All the samples presented three signals, one at 54 ppm corresponding to lattice Al(**IV**), another at 0 ppm associated with octahedrally coordinated Al, and a broad band, BB (.apprx.100 ppm wide), assigned to aluminum-containing species. As the spinning rate increased up to 11.3 kHz, a decrease of the BB intensity and an increase of the Al(**IV**) signal took place, while the Al(VI) slightly increased. The best estimate of lattice aluminum was obtained from the Al(**IV**) peak intensity. Despite the high spinning rate employed, it was possible to observe only between 70-80% of the total Al present in the samples. The catalysts were also analyzed by XRD, FTIR, and 129Xe NMR of physisorbed **xenon**. By correlating the variation of the a cell constant with Al/u.c., only qual. information was obtained. The IR band shift at .apprx.572 and 588 cm-1 at higher wave lengths, and the decrease of the bands intensity at 650 and 730 cm-1 with decreasing Al content were examined These changes in the IR spectra are a clear indication of the dealumination process carried out in the samples, thus supplementing the 27Al MAS NMR results and supplying information on the dealumination mechanism as well. 129Xe NMR results shows that nonlattice aluminum may interrupt the free exchange of mols. between the main channels and side pockets. The turnover frequency of NO disappearance remains constant with varying lattice aluminum content. The catalysts were partially deactivated after being on stream at 650° due to the addnl. dealumination occurring at high temps. in the reacting stream. Both in fresh and used catalysts, only the sites related with lattice aluminum were active in the reaction under study. The nonlattice, polymeric species, generated during dealumination, hinder the access of the reactant mols. to the active sites.

CC 59-4 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 51, 67

ST mordenite hydrogen type dealuminated spectroscopic characterization; **nitric oxide** redn catalyst dealuminated mordenite; methane redn **nitric oxide** dealuminated mordenite

IT Hydrogen mordenite-type zeolites
RL: CAT (Catalyst use); USES (Uses)
(dealuminated; spectroscopic characterization of dealuminated H-mordenites in relation to the role of different aluminum species on the selective catalytic reduction of NO with methane)

IT Dealumination
Reduction catalysts
(spectroscopic characterization of dealuminated H-mordenites in relation to the role of different aluminum species on the selective catalytic reduction of NO with methane)

IT 7429-90-5, Aluminum, processes
RL: REM (Removal or disposal); PROC (Process)
(removal from H-mordenite; spectroscopic characterization of dealuminated H-mordenites in relation to the role of different aluminum species on the selective catalytic reduction of NO with methane)

IT 74-82-8, Methane, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(spectroscopic characterization of dealuminated H-mordenites in relation to the role of different aluminum species on the selective catalytic reduction of NO with methane)

IT **10102-43-9**, Nitrogen oxide (NO), reactions
RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(spectroscopic characterization of dealuminated H-mordenites in relation to the role of different aluminum species on the selective catalytic reduction of NO with methane)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:521384 HCAPLUS
DOCUMENT NUMBER: 122:274460
TITLE: Quantum-resolved vibrational energy transfer in 79Br2 B3Π(0u+), v' ≤ 3
AUTHOR(S): Holmberg, Courtney D.; Williams, Gregory S.; Perram, Glen P.
CORPORATE SOURCE: Dep. Engineering Physics, Air Force Inst. Technology, Wright-Patterson Air Force Base, OH, 45433, USA
SOURCE: Journal of Chemical Physics (**1995**), 102(16), 6481-6
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB State-to-state vibrational energy transfer and electronic quenching in the lower vibrational levels, v' ≤ 3, of the B3Π (0u+) state of 79Br2 were investigated using spectrally resolved, **temporally** resolved laser induced fluorescence techniques. Emission from v' = 1 to 3 after laser excitation of low rotational levels, J .simeq. 10, in v' = 2-3 was observed for the following collision partners: He, Ne, Ar, Kr, Xe, N2, NO, O, O2, SF6, and Br2. The vibrational energy transfer is quite rapid in these levels and is adequately described by the Montroll-Shuler model for harmonic oscillators. The probability for vibrational-translational (V-T) transfer from v' = 1 to v' = 0 ranged from P = 0.048 ± 0.006 for He collisions to 0.20 ± 0.02 for Br2 collisions. The effect of predissocn. on the evolution of the vibrational population distributions is analyzed. The present results are compared to similar studies of vibrational transfer in the B3Π(0u+) states of IF, BrF, and BrCl by examining the scaling of V-T transfer probabilities with reduced mass of the collision pair and vibrational energy spacing. The range of the interaction potential is derived for the rare gas collision partners from the Schwartz, Slawsky, Herzfeld theory as 0.15 Å for Xe to 0.5 Å for He.

CC 65-4 (General Physical Chemistry)
Section cross-reference(s): 73

ST vibrational energy transfer bromine mol collision; helium collision bromine energy transfer; neon collision bromine energy transfer; argon collision bromine energy transfer; krypton collision bromine energy transfer; **xenon** collision bromine energy transfer; nitrogen collision bromine energy transfer; **nitric oxide** collision bromine energy transfer; oxygen collision bromine energy transfer; sulfur hexafluoride collision bromine energy transfer; fluoride sulfur collision bromine energy transfer

IT Helium-group gases, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(translational-vibrational energy transfer in collisions of excited

bromine mol. with atoms and mols. studied with spectrally resolved, **temporally** resolved laser-induced fluorescence techniques)

IT Energy transfer
(translational-vibrational, in collisions of excited bromine mol. with atoms and mols. studied with spectrally resolved, **temporally** resolved laser-induced fluorescence techniques)

IT 2551-62-4, Sulfur hexafluoride 7439-90-9, Krypton, properties 7440-01-9, Neon, properties 7440-37-1, Argon, properties 7440-59-7, Helium, properties **7440-63-3**, **Xenon**, properties 7726-95-6, Bromine, properties 7727-37-9, Nitrogen, properties 7782-44-7, Oxygen, properties **10102-43-9**, **Nitric oxide**, properties 29120-28-3, Bromine mol. (79Br2), properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(translational-vibrational energy transfer in collisions of excited bromine mol. with atoms and mols. studied with spectrally resolved, **temporally** resolved laser-induced fluorescence techniques)

L26 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:135528 HCAPLUS
DOCUMENT NUMBER: 116:135528
TITLE: Performance-oriented packaging standards; changes to classification, hazard communication, packaging and handling requirements based on UN standards and agency initiative
CORPORATE SOURCE: United States Dept. of Transportation, Washington, DC, 20590-0001, USA
SOURCE: Federal Register (**1990**), 55(246), 52402-729, **21 Dec 1990**
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The hazardous materials regulations under the Federal Hazardous Materials Transportation Act are revised based on the United Nations recommendations on the transport of dangerous goods. The regulations cover the classification of materials, packaging requirements, and package marking, labeling, and shipping documentation, as well as transportation modes and handling, and incident reporting. Performance-oriented stds. are adopted for packaging for bulk and nonbulk transportation, and SI units of measurement generally replace US customary units. Hazardous material descriptions and proper shipping names are tabulated together with hazard class, identification nos., packing group, label required, special provisions, packaging authorizations, quantity limitations, and vessel stowage requirements.

CC 59-6 (Air Pollution and Industrial Hygiene)

ST hazardous chem transport packaging

IT Infection
(agents, packaging and transport of, stds. for)

IT Resin acids and Rosin acids
RL: USES (Uses)
(aluminum salts, packaging and transport of, stds. for)

IT Alkaline earth metals
RL: USES (Uses)
(amalgams, packaging and transport of, stds. for)

IT Alkali metals, miscellaneous
RL: MSC (Miscellaneous)
(amalgams, packaging and transport of, stds. for)

IT Dyes
(coal tar, packaging and transport of, stds. for)

IT Packaging materials

(for hazardous material transport, stds. for)
IT Standards, legal and permissive
(for hazardous material transportation)
IT Bromates
Chlorites
RL: USES (Uses)
(inorg., packaging and transport of, stds. for)
IT Appliances
(life-saving, packaging and transport of, stds. for)
IT Borates
RL: USES (Uses)
(mixts. containing chlorates, packaging and transport of, stds. for)
IT Chlorates
RL: USES (Uses)
(mixts. containing, packaging and transport of, stds. for)
IT Diazonium compounds
RL: USES (Uses)
(nitrates, packaging and transport of, stds. for)
IT Paper
(oiled, packaging and transport of, stds. for)
IT Adhesives
Alcoholic beverages
Ammunition
Antifreeze substances
Bactericides, Disinfectants, and Antiseptics
Batteries, primary
Blasting gelatin
Bombs (explosives)
Carbon paper
Cartridges
Castor bean
Coating materials
Corrosive substances
Cotton
Creosote
Detonators
Dyes
Dynamite
Electric fuses
Exothermic materials
Explosives
Flavoring materials
Flue dust
Fuel cells
Fuel oil
Fuels, diesel
Fuels, jet aircraft
Fusel oil
Fuses, explosives
Gas oils
Hay
Herbicides
Igniters and Lighters
Insecticides
Lacrimators
Magnetic substances
Matches
Oxidizing agents
Perfumes
Pesticides

Petroleum products
Pharmaceuticals
Photoelectric devices
Poisons
Primers, explosive
Projectiles
Pyrophoric substances
Pyrotechnic compositions
Radioactive substances
Refrigerating apparatus
Rockets
Shale oils
Solvent naphtha
Sprays
Straw
Textiles
Thermoelectric devices
Torpedoes (weapons)
Turpentine
Wood preservatives
(packaging and transport of, stds. for)

IT Alcohols, miscellaneous
Aldehydes, miscellaneous
Alkali metal alloys, base
Alkali metals, miscellaneous
Alkaline earth alloys, base
Alkaline earth metals
Alkaloids, miscellaneous
Amines, miscellaneous
Arsenates
Arsenites
Asbestos
Asphalt
Bases, miscellaneous
Charcoal
Coal
Coke
Cyanates
Cyanides, miscellaneous
Fibers
Fluorides, miscellaneous
Gasoline
Helium-group gases, miscellaneous
Hydrides
Hypochlorites
Kerosine
Ketones, uses
Ligroine
Metals, miscellaneous
Naphtha
Natural gas
Natural gas condensates
Nitrates, miscellaneous
Nitrites
Perchlorates
Permanganates
Peroxides, uses
Petroleum
Petroleum gases, liquefied
Polyamines

Polyesters, miscellaneous
Rosin oil
Selenates
Selenites
Sulfonic acids, miscellaneous
Tar
Terpenes and Terpenoids, miscellaneous
Thiols, uses
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT Refrigeration
(agents, packaging and transport of, stds. for)

IT Sulfonic acids, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(alkane, packaging and transport of, stds. for)

IT Phenols, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(alkyl, packaging and transport of, stds. for)

IT Alkali metals, compounds
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(amides, packaging and transport of, stds. for)

IT Fertilizers
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(ammonium nitrate, packaging and transport of, stds. for)

IT Gasoline additives
(antiknock, packaging and transport of, stds. for)

IT Sulfonic acids, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(arene, packaging and transport of, stds. for)

IT Nitro compounds
RL: USES (Uses)
(aryl, potassium salts, packaging and transport of, stds. for)

IT Nitro compounds
RL: USES (Uses)
(aryl, sodium salts, packaging and transport of, stds. for)

IT Fuels
(aviation, packaging and transport of, stds. for)

IT Propellants
(black powder, packaging and transport of, stds. for)

IT Hydraulic fluids
(brake, packaging and transport of, stds. for)

IT Flours and Meals
(cakes, packaging and transport of, stds. for)

IT Resin acids and Rosin acids
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(calcium salts, packaging and transport of, stds. for)

IT Essential oils
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(camphor, packaging and transport of, stds. for)

IT Silanes
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)

(chloro, packaging and transport of, stds. for)
IT Solvents
(cleaning, packaging and transport of, stds. for)
IT Tar
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(coal, packaging and transport of, stds. for)
IT Fuel gases
(coal gas, packaging and transport of, stds. for)
IT Naphthenic acids, compounds
Resin acids and Rosin acids
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(cobalt salts, packaging and transport of, stds. for)
IT Coconut
(copra, packaging and transport of, stds. for)
IT Asbestos
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(crocidolite, packaging and transport of, stds. for)
IT Petroleum products
(distillates, packaging and transport of, stds. for)
IT Rockets
(engines, packaging and transport of, stds. for)
IT Fire
(extinguishers, packaging and transport of, stds. for)
IT Pyrotechnic compositions
(fireworks, packaging and transport of, stds. for)
IT Pyrotechnic compositions
(flare, packaging and transport of, stds. for)
IT Silicates, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(fluoro-, packaging and transport of, stds. for)
IT Gasoline
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(gasohol, packaging and transport of, stds. for)
IT Ammunition
(grenades, packaging and transport of, stds. for)
IT Asbestos
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(grunerite, packaging and transport of, stds. for)
IT Sulfites
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(hydrogen, packaging and transport of, stds. for)
IT Organic compounds, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(iodyl, packaging and transport of, stds. for)
IT Group VIII elements
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(iron-group, packaging and transport of, stds. for)
IT Air
Corrosive substances
(liquid, packaging and transport of, stds. for)
IT Gases

(liquefied, packaging and transport of, stds. for)
IT Resin acids and Rosin acids
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(manganese salts, packaging and transport of, stds. for)
IT Castor bean
Fish
(meal, packaging and transport of, stds. for)
IT Organometallic compounds
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(metal alkyls, packaging and transport of, stds. for)
IT Explosives
(mines, packaging and transport of, stds. for)
IT Carbohydrates and Sugars, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(nitro, packaging and transport of, stds. for)
IT Aromatic compounds
RL: USES (Uses)
(nitro, potassium salts, packaging and transport of, stds. for)
IT Aromatic compounds
RL: USES (Uses)
(nitro, sodium salts, packaging and transport of, stds. for)
IT Fertilizers
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(nitrogen, packaging and transport of, stds. for)
IT Peroxides, miscellaneous
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(organic, packaging and transport of, stds. for)
IT Coating materials
(paints, packaging and transport of, stds. for)
IT Essential oils
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(pine, packaging and transport of, stds. for)
IT Inks
(printing, packaging and transport of, stds. for)
IT Matches
(safety, packaging and transport of, stds. for)
IT Alkaloids, compounds
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(salts, packaging and transport of, stds. for)
IT Containers
(shipping, for hazardous material transport, stds. for)
IT Pyrotechnic compositions
(signal rockets, packaging and transport of, stds. for)
IT Pyrotechnic compositions
(smoke-generating, packaging and transport of, stds. for)
IT Propellants
(smokeless, packaging and transport of, stds. for)
IT Pharmaceutical dosage forms
(tinctures, packaging and transport of, stds. for)
IT Ammunition
Pyrotechnic compositions
(tracers, packaging and transport of, stds. for)
IT Resin acids and Rosin acids

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(zinc salts, packaging and transport of, stds. for)

IT 64-17-5
RL: OCCU (Occurrence)
(alcoholic beverages, packaging and transport of, stds. for)

IT 50-00-0, Formaldehyde, miscellaneous 54-11-5, Nicotine 54-11-5D, Nicotine, compds. 55-63-0, Nitroglycerin 55-68-5, Phenylmercuric nitrate 56-18-8, 3,3'-Iminodipropylamine 56-23-5, miscellaneous 56-38-2, Parathion 57-06-7, Allyl isothiocyanate 57-14-7 57-24-9D, Strychnine, salts 60-00-4, EDTA, miscellaneous 60-24-2 60-29-7, Diethyl ether, miscellaneous 60-34-4, Methylhydrazine 60-57-1, Dieldrin 62-38-4, Phenylmercuric acetate 62-53-3, Aniline, miscellaneous 62-74-8, Sodium fluoroacetate 64-17-5, Ethanol, miscellaneous 64-18-6, Formic acid, miscellaneous 64-18-6D, Formic acid, chloro derivs. 64-19-7, Acetic acid, miscellaneous 64-67-5, Diethyl sulfate 66-25-1, Hexaldehyde 67-56-1, Methanol, miscellaneous 67-63-0, Isopropanol, miscellaneous 67-64-1, Acetone, miscellaneous 67-66-3, Chloroform, miscellaneous 68-11-1, Thioglycolic acid, miscellaneous 68-12-2, N,N-Dimethylformamide, miscellaneous 70-11-1, Phenacyl bromide 70-30-4, Hexachlorophene 71-23-8, n-Propanol, miscellaneous 71-41-0, 1-Pentanol, miscellaneous 71-43-2, Benzene, miscellaneous 71-55-6, 1,1,1-Trichloroethane 74-82-8, Methane, miscellaneous 74-83-9, miscellaneous 74-84-0, Ethane, miscellaneous 74-85-1, Ethylene, miscellaneous 74-86-2, Acetylene, miscellaneous 74-87-3, Methyl chloride, miscellaneous 74-88-4, Methyl iodide, miscellaneous 74-89-5, Methylamine, miscellaneous 74-90-8, Hydrogen cyanide, miscellaneous 74-93-1, Methyl mercaptan, miscellaneous 74-95-3, Dibromomethane 74-96-4, Ethyl bromide 74-97-5, Bromochloromethane 74-98-6, Propane, miscellaneous 75-00-3, Ethyl chloride 75-01-4, miscellaneous 75-02-5, Vinyl fluoride 75-04-7, Ethylamine, miscellaneous 75-05-8, Methyl cyanide, miscellaneous 75-07-0, Acetaldehyde, miscellaneous 75-08-1, Ethyl mercaptan 75-09-2, Dichloromethane, miscellaneous 75-15-0, Carbon disulfide, miscellaneous 75-16-1, Methyl magnesium bromide 75-18-3, Dimethyl sulfide 75-19-4, Cyclopropane 75-20-7, Calcium carbide 75-21-8, Ethylene oxide, miscellaneous 75-21-8 75-25-2, Bromoform 75-26-3, 2-Bromopropane 75-28-5, Isobutane 75-28-5D, Isobutane, mixts. 75-29-6, 2-Chloropropane 75-31-0, Isopropylamine, miscellaneous 75-33-2, Isopropyl mercaptan 75-34-3, 1,1-Dichloroethane 75-35-4, miscellaneous 75-36-5, Acetyl chloride 75-38-7, 1,1-Difluoroethylene 75-39-8, Acetaldehyde ammonia 75-43-4, Dichloromonofluoromethane 75-44-5, Phosgene 75-45-6, Chlorodifluoromethane 75-46-7, Trifluoromethane 75-50-3, Trimethylamine, miscellaneous 75-52-5, Nitromethane, miscellaneous 75-54-7, Methyldichlorosilane 75-55-8, Propylenimine 75-56-9, Propylene oxide, miscellaneous 75-59-2, Tetramethylammonium hydroxide 75-60-5, Cacodylic acid 75-61-6, Dibromodifluoromethane 75-63-8 75-71-8, Dichlorodifluoromethane 75-72-9, Chlorotrifluoromethane 75-73-0, Tetrafluoromethane 75-76-3, Tetramethylsilane 75-77-4, Trimethylchlorosilane, miscellaneous 75-78-5, Dimethyldichlorosilane 75-79-6, Methyltrichlorosilane 75-83-2 75-86-5, Acetone cyanohydrin 75-87-6, **Chloral** 75-91-2, tert-Butyl hydroperoxide 75-94-5, Vinyltrichlorosilane 76-01-7, Pentachloroethane 76-02-8, Trichloroacetyl chloride 76-03-9, properties 76-05-1, Trifluoroacetic acid, miscellaneous 76-06-2, Chloropicrin 76-06-2D, Chloropicrin, mixts. 76-15-3 76-16-4, Hexafluoroethane 76-19-7, Octafluoropropane 76-22-2, Camphor 77-47-4, Hexachlorocyclopentadiene 77-73-6 77-78-1, Dimethyl sulfate 78-00-2, Tetraethyl lead 78-10-4, Tetraethyl silicate 78-62-6, Dimethyldiethoxysilane 78-67-1, Azodiisobutyronitrile 78-76-2,

2-Bromobutane 78-78-4, Isopentane 78-79-5, Isoprene, miscellaneous 78-81-9, Isobutylamine 78-82-0, Isobutyronitrile 78-83-1, Isobutanol, miscellaneous 78-84-2, Isobutyraldehyde 78-85-3, Methacrylaldehyde 78-87-5, Propylene dichloride 78-89-7, Propylene chlorohydrin 78-90-0, 1,2-Propylenediamine 78-93-3, 2-Butanone, miscellaneous 78-94-4, Methyl vinyl ketone, miscellaneous 78-95-5, Monochloroacetone 79-01-6, Trichloroethylene, miscellaneous 79-03-8, Propionyl chloride 79-04-9, Chloroacetyl chloride 79-06-1, Acrylamide, miscellaneous 79-08-3, Bromoacetic acid 79-09-4, Propionic acid, miscellaneous 79-10-7, 2-Propenoic acid, miscellaneous 79-11-8, Chloroacetic acid, miscellaneous 79-20-9, Methyl acetate 79-21-0, Peroxyacetic acid 79-22-1 79-24-3, Nitroethane 79-29-8, 2,3-Dimethylbutane 79-30-1, Isobutyryl chloride 79-31-2, Isobutyric acid 79-36-7, Dichloroacetyl chloride 79-38-9 79-41-4, miscellaneous 79-42-5 79-43-6, Dichloroacetic acid, miscellaneous 79-44-7, Dimethylcarbamoyl chloride 80-10-4, Diphenyldichlorosilane 80-15-9, Cumene hydroperoxide 80-17-1, Benzene sulfohydrazide 80-47-7, p-Menthane hydroperoxide 80-51-3, Diphenyloxide-4,4'-disulfohydrazide 80-56-8, α-Pinene 80-62-6 81-15-2 82-71-3 85-44-9, 1,3-Isobenzofurandione 86-50-0, Azinphos methyl 87-68-3, Hexachlorobutadiene 87-90-1 88-17-5, 2-Trifluoromethylaniline 88-72-2, o-Nitrotoluene 88-73-3, o-Chloronitrobenzene 88-74-4, o-Nitroaniline 88-75-5, o-Nitrophenol 88-89-1 89-58-7, p-Nitroxylene 91-17-8, Decahydronaphthalene 91-20-3, Naphthalene, miscellaneous 91-20-3D, Naphthalene, diozonide derivs. 91-22-5, Quinoline, miscellaneous 91-59-8, β-Naphthylamine 91-66-7, N,N-Diethylaniline 92-52-4D, Biphenyl, chloro derivs. 92-52-4D, Biphenyl, halo derivs. 92-59-1, N-Ethyl-N-benzylaniline 92-87-5, Benzidine 93-58-3, Methyl benzoate 94-17-7, p-Chlorobenzoyl peroxide 94-36-0, Benzoyl peroxide, miscellaneous 95-48-7, miscellaneous 95-50-1, o-Dichlorobenzene 95-54-5, o-Phenylenediamine, miscellaneous 95-55-6, o-Aminophenol 95-80-7 95-85-2, 2-Amino-4-chlorophenol 96-12-8, Dibromochloropropane 96-22-0, Diethyl ketone 96-23-1 96-24-2, Glycerol α-monochlorohydrin 96-32-2, Methyl bromoacetate 96-33-3 96-34-4, Methyl chloroacetate 96-37-7, Methyl cyclopentane 96-41-3, Cyclopentanol 97-62-1, Ethyl isobutyrate 97-63-2 97-64-3, Ethyl lactate 97-72-3, Isobutyric anhydride 97-85-8, Isobutyl isobutyrate 97-86-9 97-88-1 97-95-0 97-96-1, 2-Ethylbutyraldehyde 98-00-0, Furfuryl alcohol 98-01-1, Furfural, miscellaneous 98-07-7, Benzotrichloride 98-08-8, Benzotrifluoride 98-09-9, Benzene sulfonyl chloride 98-12-4, Cyclohexyltrichlorosilane 98-13-5, Phenyltrichlorosilane 98-16-8, 3-Trifluoromethylaniline 98-82-8, Isopropylbenzene 98-83-9, miscellaneous 98-85-1, α-Methylbenzyl alcohol 98-87-3, Benzylidene chloride 98-88-4, Benzoyl chloride 98-94-2 98-95-3, Nitrobenzene, miscellaneous 99-08-1, m-Nitrotoluene 99-09-2, m-Nitroaniline 99-35-4, Trinitrobenzene 99-99-0, p-Nitrotoluene 100-00-5 100-01-6, p-Nitroaniline, miscellaneous 100-02-7, p-Nitrophenol, miscellaneous 100-17-4 100-34-5, Benzene diazonium chloride
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT 100-36-7, N,N-Diethylethylenediamine 100-37-8, Diethylaminoethanol 100-39-0, Benzyl bromide 100-41-4, Ethylbenzene, miscellaneous 100-42-5, miscellaneous 100-44-7, Benzyl chloride, miscellaneous 100-47-0, Benzonitrile, miscellaneous 100-50-5, 1,2,3,6-Tetrahydrobenzaldehyde 100-57-2, Phenylmercuric hydroxide 100-61-8, N-Methylaniline, miscellaneous 100-63-0, Phenylhydrazine 100-66-3, Anisole, miscellaneous 100-73-2, Acrolein dimer 101-25-7, N,N'-Dinitrosopentamethylenetetramine 101-68-8 101-77-9,

4,4'-Diaminodiphenyl methane 101-83-7, Dicyclohexylamine 102-69-2, Tripropylamine 102-70-5, Triallylamine 102-81-8, Dibutylaminoethanol 102-82-9, Tributylamine 103-65-1, n-Propylbenzene 103-69-5, N-Ethylaniline 103-71-9, Phenylisocyanate, miscellaneous 103-80-0, Phenylacetyl chloride 103-83-3, Benzyldimethylamine 104-15-4, Toluene sulfonic acid, miscellaneous 104-51-8, Butylbenzene 104-75-6, 2-Ethylhexylamine 104-78-9 104-90-5, 2-Methyl-5-ethylpyridine 105-36-2 105-37-3, Ethyl propionate 105-39-5, Ethyl chloroacetate 105-48-6, Isopropyl chloroacetate 105-54-4, Ethyl butyrate 105-56-6, Ethyl cyanoacetate 105-57-7, Acetal 105-58-8, Diethyl carbonate 105-64-6, Isopropyl peroxydicarbonate 105-74-8, Lauroyl peroxide 106-31-0, Butyric anhydride 106-44-5, p-Cresol, miscellaneous 106-46-7, p-Dichlorobenzene 106-50-3, p-Phenylenediamine, miscellaneous 106-51-4, 2,5-Cyclohexadiene-1,4-dione, miscellaneous 106-63-8, Isobutyl acrylate 106-68-3, Ethyl amyl ketone 106-88-7, 1,2-Butylene oxide 106-89-8, miscellaneous 106-92-3, Allyl glycidyl ether 106-93-4, Ethylene dibromide 106-95-6, Allyl bromide, miscellaneous 106-96-7, 3-Bromopropyne 106-97-8, Butane, miscellaneous 106-97-8D, Butane, mixts. 106-99-0, 1,3-Butadiene, miscellaneous 107-00-6, Ethylacetylene 107-02-8, 2-Propenal, miscellaneous 107-05-1, Allyl chloride 107-06-2, Ethylene dichloride, miscellaneous 107-07-3, Ethylene chlorohydrin, miscellaneous 107-10-8, Propylamine, miscellaneous 107-11-9, Allylamine 107-12-0, Propionitrile 107-13-1, Acrylonitrile, miscellaneous 107-14-2, Chloroacetonitrile 107-15-3, Ethylenediamine, miscellaneous 107-18-6, Allyl alcohol, miscellaneous 107-19-7, Propargyl alcohol 107-20-0, Chloroacetaldehyde 107-25-5, Vinylmethyl ether 107-29-9, Acetaldehyde oxime 107-30-2, Methylchloromethyl ether 107-31-3, Methyl formate 107-37-9, Allyltrichlorosilane 107-49-3, Tetraethyl pyrophosphate 107-70-0 107-71-1, tert-Butyl peroxylacetate 107-72-2, Amyltrichlorosilane 107-81-3, 2-Bromopentane 107-82-4, 1-Bromo-3-methylbutane 107-87-9, Methyl propyl ketone 107-89-1, Aldol 107-92-6, Butyric acid, miscellaneous 108-01-0, Dimethylethanolamine 108-05-4, Acetic acid ethenyl ester, miscellaneous 108-09-8, 1,3-Dimethylbutylamine 108-10-1, Methyl isobutyl ketone 108-11-2, Methyl isobutyl carbinol 108-18-9, Diisopropylamine 108-20-3, Diisopropyl ether 108-21-4, Isopropyl acetate 108-22-5, Isopropenyl acetate 108-23-6, Isopropyl chloroformate 108-24-7, Acetic anhydride 108-31-6, 2,5-Furandione, miscellaneous 108-39-4, miscellaneous 108-45-2, m-Phenylenediamine, miscellaneous 108-46-3, Resorcinol, miscellaneous 108-67-8, miscellaneous 108-77-0 108-83-8, Diisobutyl ketone 108-84-9 108-86-1, Benzene, bromo-, miscellaneous 108-87-2, Methyl cyclohexane 108-88-3, Toluene, miscellaneous 108-90-7, Chlorobenzene, miscellaneous 108-91-8, Cyclohexylamine, miscellaneous 108-94-1, Cyclohexanone, miscellaneous 108-95-2, Phenol, miscellaneous 108-98-5, Phenyl mercaptan, miscellaneous 109-02-4 109-09-1, 2-Chloropyridine 109-13-7, tert-Butyl peroxyisobutyrate 109-52-4, Valeric acid, miscellaneous 109-53-5, Vinyl isobutyl ether 109-60-4, n-Propyl acetate 109-61-5, n-Propyl chloroformate 109-63-7, Boron trifluoride diethyl etherate 109-65-9, n-Butyl bromide 109-66-0, Pentane, miscellaneous 109-70-6, 1-Chloro-3-bromopropane 109-73-9, n-Butylamine, miscellaneous 109-74-0, Butyronitrile 109-77-3, Malononitrile 109-79-5, Butyl mercaptan 109-86-4, Ethylene glycol monomethyl ether 109-87-5, Methylal 109-89-7, Diethylamine, miscellaneous 109-90-0, Ethyl isocyanate 109-92-2, Vinyl ethyl ether 109-93-3, Divinyl ether 109-94-4, Ethyl formate 109-95-5, Ethyl nitrite 109-99-9, Tetrahydrofuran, miscellaneous 110-00-9, Furan 110-01-0, Tetrahydrothiophene 110-02-1, Thiophene 110-12-3, 5-Methylhexan-2-one 110-16-7, Maleic acid, miscellaneous 110-18-9 110-19-0 110-22-5, Diacetyl peroxide 110-43-0, Amyl methyl ketone 110-49-6 110-54-3, Hexane, miscellaneous 110-58-7, Amylamine

110-62-3, Valeraldehyde 110-66-7, Amyl mercaptan 110-68-9, N-Methylbutylamine 110-69-0, Butyraldoxime 110-71-4, 1,2-Dimethoxyethane 110-74-7, Propyl formate 110-78-1, n-Propyl isocyanate 110-80-5, Ethylene glycol monoethyl ether 110-82-7, Cyclohexane, miscellaneous 110-83-8, Cyclohexene, miscellaneous 110-85-0, Piperazine, miscellaneous 110-86-1, Pyridine, miscellaneous 110-87-2 110-89-4, Piperidine, miscellaneous 110-91-8, Morpholine, miscellaneous 110-96-3, Diisobutylamine 111-15-9, Ethylene glycol monoethyl ether acetate 111-34-2, Butylvinyl ether 111-36-4, n-Butyl isocyanate 111-40-0 111-43-3, Dipropyl ether 111-49-9, Hexamethylenimine 111-65-9, Octane, miscellaneous 111-69-3, Adiponitrile 111-71-7, n-Heptaldehyde 111-76-2, Ethylene glycol monobutyl ether 111-92-2, Di-n-butylamine 112-04-9 112-24-3, Triethylenetetramine 112-57-2 115-07-1, Propylene, miscellaneous 115-10-6, Dimethyl ether 115-11-7, Isobutylene, miscellaneous 115-21-9, Ethyltrichlorosilane 115-25-3, Octafluorocyclobutane 116-14-3, Tetrafluoroethylene, miscellaneous 116-15-4, Hexafluoropropylene 116-16-5, Hexachloroacetone 116-54-1, Methyl dichloroacetate 118-74-1, Hexachlorobenzene 118-96-7, Trinitrotoluene 120-92-3, Cyclopentanone 121-43-7, Trimethyl borate 121-44-8, Triethylamine, miscellaneous 121-45-9, Trimethyl phosphite 121-46-0, 2,5-Norbornadiene 121-69-7, N,N-Dimethylaniline, miscellaneous 121-73-3 121-82-4, Cyclotrimethylenetrinitramine 122-51-0, Ethyl orthoformate 122-52-1, Triethyl phosphite 123-00-2, 4-Morpholinepropanamine 123-15-9 123-19-3, Dipropylketone 123-20-6, Vinyl butyrate 123-23-9, Succinic acid peroxide 123-30-8, p-Aminophenol 123-31-9, Hydroquinone, miscellaneous 123-38-6, Propionaldehyde, miscellaneous 123-42-2, Diacetone alcohol 123-54-6, 2,4-Pentanedione, miscellaneous 123-62-6, Propionic anhydride 123-63-7, Paraldehyde 123-72-8, Butyraldehyde 123-75-1, Pyrrolidine, miscellaneous 123-86-4, Butyl acetate 123-91-1, Dioxane, miscellaneous 124-02-7, Diallylamine 124-09-4, Hexamethylenediamine, miscellaneous 124-13-0, Octyl aldehyde 124-18-5, n-Decane 124-38-9, Carbon dioxide, miscellaneous 124-40-3, Dimethylamine, miscellaneous 124-41-4, Sodium methylate 124-43-6 124-47-0, Urea nitrate 124-65-2, Sodium cacodylate 126-98-7, Methacrylonitrile 126-99-8, Chloroprene 127-18-4, Tetrachloroethylene, miscellaneous 127-85-5, Sodium arsanilate 129-79-3 131-52-2, Sodium pentachlorophenate 131-73-7, Hexanitrodiphenylamine 131-74-8, Ammonium picrate 133-14-2 133-55-1, N,N'-Dinitroso-N,N'-dimethyl terephthalamide 134-32-7, α-Naphthylamine
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT 138-86-3, Dipentene 138-89-6 139-02-6, Sodium phenolate 140-29-4, Phenylacetonitrile 140-31-8, 1-Piperazineethanamine 140-80-7 140-88-5 141-32-2 141-43-5, Ethanolamine, miscellaneous 141-57-1, Propyltrichlorosilane 141-59-3, tert-Octylmercaptan 141-75-3, Butyryl chloride 141-78-6, Ethyl acetate, miscellaneous 141-79-7, Mesityl oxide 142-04-1, Aniline hydrochloride 142-29-0, Cyclopentene 142-62-1, Hexanoic acid, miscellaneous 142-82-5, Heptane, miscellaneous 142-84-7, Dipropylamine 142-96-1, Dibutyl ether 143-33-9, Sodium cyanide 144-49-0, Fluoroacetic acid 144-62-7D, Ethanedioic acid, salts 146-84-9, Silver picrate 149-74-6, Methylphenyldichlorosilane 151-50-8, Potassium cyanide 151-56-4, Ethylenimine, miscellaneous 156-62-7, Calcium cyanamide 260-94-6, Acridine 283-66-9, Hexamethylene triperoxide diamine 287-23-0, Cyclobutane 287-92-3, Cyclopentane 291-64-5, Cycloheptane 298-00-0, Methyl parathion 298-07-7 302-01-2, Hydrazine, miscellaneous 309-00-2, Aldrin 352-93-2, Diethyl sulfide 353-36-6, Ethyl fluoride 353-42-4, Boron trifluoride dimethyl etherate

353-50-4, Carbonyl fluoride 353-59-3 354-32-5, Trifluoroacetylchloride 357-57-3, Brucine 360-89-4, Octafluorobut-2-ene 428-59-1, Hexafluoropropylene oxide 431-03-8, Butanedione 460-19-5, Cyanogen 462-06-6, Fluorobenzene 462-08-8, m-Aminopyridine 462-95-3, Diethoxymethane 463-04-7, Amyl nitrite 463-49-0, Propadiene 463-58-1, Carbonyl sulfide 463-71-8, Thiophosgene 463-82-1, 2,2-Dimethylpropane 479-45-8 501-53-1, Benzyl chloroformate 502-98-7D, salts 503-74-2, Isopentanoic acid 504-24-5, 4-Pyridinamine 504-29-0, 2-Pyridinamine 506-64-9, Silver cyanide (Ag(CN)) 506-68-3, Cyanogen bromide 506-77-4, Cyanogen chloride 506-85-4, Fulminic acid 506-93-4, Guanidine nitrate 506-96-7, Acetyl bromide 507-02-8, Acetyl iodide 507-09-5, Thioacetic acid, miscellaneous 507-70-0, Borneol 509-14-8, Tetranitromethane 512-85-6, Ascaridole 513-35-9, 2-Methyl-2-butene 513-38-2 513-42-8, Methallyl alcohol 513-48-4, 2-Iodobutane 513-86-0, Acetyl methyl carbinol 517-25-9, Trinitromethane 517-92-0, 1,8-Dihydroxy-2,4,5,7-tetranitroanthraquinone 519-44-8D, 2,4-Dinitroresorcinol, heavy metal salts 532-27-4, Chloracetophenone 533-51-7, Silver oxalate 534-07-6, 1,3-Dichloroacetone 534-15-6, 1,1-Dimethoxyethane 534-22-5, 2-Methylfuran 535-13-7, Ethyl-2-chloropropionate 540-18-1, Amyl butyrate 540-42-1, Isobutyl propionate 540-54-5, Propyl chloride 540-67-0, Ethyl methyl ether 540-73-8 540-82-9, Ethylsulfuric acid 540-84-1, Isooctane 541-41-3, Ethyl chloroformate 542-55-2, Isobutyl formate 542-62-1, Barium cyanide 542-88-1, Dichlorodimethyl ether, symmetrical 543-27-1, Isobutyl chloroformate 543-59-9, Amyl chloride 544-16-1, Butyl nitrite 544-25-2, Cycloheptatriene 544-97-8, Dimethyl zinc 545-55-1, Tris(1-aziridinyl)phosphine oxide 554-12-1, Methyl propionate 554-84-7, m-Nitrophenol 555-54-4, Magnesium diphenyl 556-24-1, Methyl isovalerate 556-56-9, Allyl iodide 556-61-6, Methyl isothiocyanate 556-88-7 556-89-8, Nitrourea 557-17-5, Methyl propyl ether 557-19-7, Nickel cyanide (Ni(CN)2) 557-20-0, Diethylzinc 557-21-1, Zinc cyanide 557-31-3, Allyl ethyl ether 557-40-4, Diallylether 557-98-2, 2-Chloropropene 558-13-4, Carbon tetrabromide 563-45-1, 3-Methyl-1-butene 563-46-2, 2-Methyl-1-butene 563-47-3, Methyl allyl chloride 563-80-4, 3-Methylbutan-2-one 578-54-1, 2-Ethylaniline 578-94-9, Diphenylamine chloroarsine 582-61-6, Benzoyl azide 583-15-3, Mercury benzoate 584-79-2, Allethrin 585-79-5, 1-Bromo-3-nitrobenzene 586-62-9, Terpinolene 587-85-9D, compds. 590-01-2, Butylpropionate 590-36-3, 2-Methylpentan-2-ol 591-27-5, m-Aminophenol 591-87-7, Allyl acetate 591-89-9, Mercuric potassium cyanide 592-01-8, Calcium cyanide 592-05-2, Lead cyanide (Pb(CN)2) 592-34-7, n-Butylchloroformate 592-41-6, 1-Hexene, miscellaneous 592-55-2, 2-Bromoethyl ethyl ether 592-63-2 592-84-7, n-Butylformate 593-53-3, Methyl fluoride 593-60-2, Vinyl bromide 593-89-5, Methyldichloroarsine 594-42-3, Perchloromethylmercaptan 594-72-9, 1,1-Dichloro-1-nitroethane 598-14-1, Ethyldichloroarsine 598-21-0, Bromoacetyl bromide 598-31-2, Bromoacetone 598-57-2, Methyl nitramine 598-57-2D, Methyl nitramine, metal salts 598-58-3, Methyl nitrate 598-73-2, Bromotrifluoroethylene 598-78-7, α-Chloropropionic acid 598-99-2, Methyl trichloroacetate 602-96-0, 1,3,5-Trimethyl-2,4,6-trinitrobenzene 602-99-3, Trinitro-m-cresol 602-99-3D, Methyl picric acid, heavy metal salts 608-50-4, 2,4-Dinitro-1,3,5-trimethylbenzene 610-38-8, 4-Bromo-1,2-dinitrobenzene 616-38-6, Dimethyl carbonate 616-74-0D, 4,6-Dinitroresorcinol, heavy metal salts 617-37-8 617-50-5, Isopropyl isobutyrate 617-89-0, Furfurylamine 619-97-6, Benzene diazonium nitrate 620-05-3, Benzyl iodide 622-44-6, Phenylcarbylamine chloride 622-45-7, Cyclohexyl acetate 623-42-7, Methyl butyrate 623-87-0, Glycerol-1,3-dinitrate 624-61-3, Dibromoacetylene 624-74-8, Diiodoacetylene 624-83-9, Methyl isocyanate 624-91-9, Methyl nitrite 624-92-0, Dimethyl disulfide 625-76-3, Dinitromethane 626-67-5,

1-Methylpiperidine 627-13-4, n-Propyl nitrate 627-30-5 627-63-4, Fumaryl chloride 628-28-4, Butyl methyl ether 628-32-0, Ethyl propyl ether 628-63-7, Amyl acetate 628-81-9, Ethyl butyl ether 628-86-4, Mercury fulminate 628-92-2, Cycloheptene 628-96-6, Ethylene glycol dinitrate 629-13-0, 1,2-Diazidoethane 629-14-1 629-20-9, Cyclooctatetraene 630-08-0, Carbon monoxide, miscellaneous 630-72-8, Trinitroacetonitrile 637-78-5, Isopropyl propionate 638-11-9, Isopropyl butyrate 638-29-9, Valeryl chloride 638-49-3, Amyl formate 641-16-7, 2,3,4,6-Tetranitrophenol 644-31-5, Acetyl benzoyl peroxide 644-97-3, Phenyl phosphorus dichloride 645-55-6, N-Nitroaniline 646-06-0, Dioxolane 674-81-7, Nitrosoguanidine 674-82-8, Diketene 676-83-5, Methyl phosphonous dichloride 676-97-1, Methyl phosphonic dichloride 676-98-2, Methyl phosphonothioic dichloride 677-71-4, Hexafluoroacetone hydrate 681-84-5, Methyl orthosilicate 684-16-2, Hexafluoroacetone 693-21-0, Diethylene glycol dinitrate 694-05-3, 1,2,3,6-Tetrahydropyridine 757-58-4, Hexaethyl tetraphosphate 762-12-9, Decanoyl peroxide 762-13-0, Pelargonyl peroxide 762-16-3 765-34-4, Glycidaldehyde 766-09-6, 1-Ethylpiperidine 771-29-9, Tetralin hydroperoxide 776-74-9, Diphenylmethyl bromide 814-78-8, Methyl isopropenyl ketone 822-06-0 831-52-7, Sodium picramate 883-40-9, Diazodiphenylmethane 918-37-6, Hexanitroethane 918-54-7, Trinitroethanol 926-63-6 926-64-7, 2-Dimethylaminoacetonitrile 928-65-4, Hexyltrichlorosilane 929-06-6, 2-(2-Aminoethoxy)ethanol 993-00-0, Methylchlorosilane 993-12-4 993-43-1, Ethyl phosphonothioic dichloride
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IT 1002-16-0, Amyl nitrate 1070-19-5, tert-Butoxycarbonyl azide 1120-21-4, Undecane 1125-27-5 1126-78-9 1187-93-5, Perfluoromethyl vinyl ether 1299-86-1, Aluminum carbide 1300-64-7, Anisoyl chloride 1300-71-6, Xylenol 1300-73-8D, derivs. 1303-28-2, Arsenic pentoxide 1303-33-9, Arsenic sulfide 1303-33-9D, Arsenic sulfide, mixture with chlorates 1304-28-5, Barium oxide, miscellaneous 1304-29-6, Barium peroxide 1305-78-8, Calcium oxide, miscellaneous 1305-79-9, Calcium peroxide 1305-99-3, Calcium phosphide 1309-60-0, Lead dioxide 1310-58-3, Potassium hydroxide, miscellaneous 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, miscellaneous 1310-82-3, Rubidium hydroxide 1312-73-8, Potassium sulfide 1313-60-6, Sodium peroxide 1313-82-2, Sodium sulfide, miscellaneous 1314-18-7, Strontium peroxide 1314-22-3, Zinc peroxide 1314-24-5, Phosphorus trioxide 1314-34-7, Vanadium trioxide 1314-56-3, Phosphorus pentoxide, miscellaneous 1314-62-1, Vanadium pentoxide, miscellaneous 1314-80-3, Phosphorus sulfide (P2S5) 1314-84-7, Zinc phosphide 1314-85-8, Phosphorus sesquisulfide 1319-77-3, Cresylic acid 1320-37-2, Dichlorotetrafluoroethane 1321-10-4, Chlorocresol 1321-31-9, Phenetidine 1327-53-3, Arsenic trioxide 1330-20-7, Xylene, miscellaneous 1330-45-6, Chlorotrifluoroethane 1330-78-5, Tricresyl phosphate 1331-22-2, Methyl cyclohexanone 1332-12-3, Fulminating gold 1332-37-2, Iron oxide, properties 1333-39-7, Phenolsulfonic acid 1333-41-1, Picoline 1333-74-0, Hydrogen, miscellaneous 1333-82-0, Chromium trioxide 1333-83-1, Sodium hydrogen fluoride 1335-26-8, Magnesium peroxide 1335-31-5, Mercury oxycyanide 1335-85-9, Dinitro-o-cresol 1336-21-6, Ammonium hydroxide 1337-81-1 1338-23-4, Methyl ethyl ketone peroxide 1341-24-8, Chloroacetophenone 1341-49-7, Ammonium hydrogen fluoride 1344-40-7, Lead phosphite, dibasic 1344-67-8, Copper chloride 1498-40-4, Ethyl phosphonous dichloride 1498-51-7, Ethyl phosphorodichloridate 1569-69-3, Cyclohexyl mercaptan 1609-86-5, tert-Butyl isocyanate 1623-15-0 1623-24-1, Isopropyl acid phosphate 1634-04-4, Methyl-tert-butyl ether 1693-71-6, Triallyl

borate 1705-60-8, 2,2-Di(4,4-di-tert-butylperoxycyclohexyl)propane 1712-64-7, Isopropyl nitrate 1719-53-5, Diethyldichlorosilane 1737-93-5, 3,5-Dichloro-2,4,6-trifluoropyridine 1789-58-8, Ethyldichlorosilane 1795-48-8, Isopropyl isocyanate 1838-59-1, Allyl formate 1873-29-6, Isobutyl isocyanate 1885-14-9, Phenylchloroformate 1947-27-9, Arsenic trichloride 2050-92-2, Di-n-amylamine 2094-98-6, 1,1'-Azodi(hexahydrobenzonitrile) 2144-45-8, Dibenzyl peroxydicarbonate 2155-71-7 2167-23-9, 2,2-Di(tert-butylperoxy)butane 2217-06-3, Dipicryl sulfide 2243-94-9, 1,3,5-Trinitronaphthalene 2244-21-5, Potassium dichloroisocyanurate 2294-47-5, p-Diazidobenzene 2312-76-7 2338-12-7, 5-Nitrobenzotriazole 2487-90-3, Trimethoxysilane 2508-19-2, Trinitrobenzenesulfonic acid 2524-03-0, Dimethyl chlorothiophosphate 2524-04-1, Diethylthiophosphoryl chloride 2549-51-1, Vinyl chloroacetate 2551-62-4, Sulfur hexafluoride 2567-83-1, Tetraethylammonium perchlorate 2657-00-3, Sodium 2-diazo-1-naphthol-5-sulfonate 2691-41-0, Cyclotetramethylenetetranitramine 2696-92-6, Nitrosyl chloride 2699-79-8, Sulfuryl fluoride 2782-57-2, Dichloroisocyanuric acid 2782-57-2D, Dichloroisocyanuric acid, salts 2820-51-1, Nicotine hydrochloride 2825-15-2 2855-13-2, Isophoronediamine 2867-47-2, Dimethylaminoethyl methacrylate 2893-78-9, Sodium dichloroisocyanurate 2937-50-0, Allyl chloroformate 2941-64-2, Ethyl chlorothioformate 2980-64-5 3025-88-5, 2,5-Dimethyl-2,5-dihydroperoxy hexane 3031-74-1, Ethyl hydroperoxide 3032-55-1 3054-95-3, 3,3-Diethoxypropene 3087-37-4, Tetrapropylorthotitanate 3129-90-6, Isothiocyanic acid 3129-91-7, Dicyclohexylammonium nitrite 3132-64-7, Epibromohydrin 3165-93-3, 4-Chloro-o-toluidine hydrochloride 3173-53-3, Cyclohexyl isocyanate 3179-56-4, Acetyl cyclohexanesulfonyl peroxide 3188-13-4, Chloromethyl ethyl ether 3248-28-0, Dipropionyl peroxide 3268-49-3 3275-73-8, Nicotine tartrate 3282-30-2, Trimethylacetyl chloride 3497-00-5, Phenyl phosphorus thiodichloride 3689-24-5 3724-65-0, Crotonic acid 3811-04-9, Potassium chlorate 3926-62-3, Sodium chloroacetate 3982-91-0, Thiophosphoryl chloride 4016-11-9, 1,2-Epoxy-3-ethoxypropane 4098-71-9 4109-96-0, Dichlorosilane 4170-30-3, Crotonaldehyde 4300-97-4 4316-42-1, N-n-Butylimidazole 4419-11-8, 2,2'-Azodi(2,4-dimethylvaleronitrile) 4421-50-5 4435-53-4, Butoxyl 4452-58-8, Sodium percarbonate 4472-06-4, Carbonazidodithioic acid 4484-72-4, Dodecyltrichlorosilane 4528-34-1 4547-70-0 4591-46-2 4682-03-5, Diazodinitrophenol 4795-29-3, Tetrahydrofurfurylamine 4904-61-4, 1,5,9-Cyclododecatriene 5283-66-9, Octyltrichlorosilane 5283-67-0, Nonyltrichlorosilane 5329-14-6, Sulfamic acid 5419-55-6, Triisopropyl borate 5610-59-3, Silver fulminate 5637-83-2, Cyanuric triazide 5653-21-4 5894-60-0, Hexadecyltrichlorosilane 5970-32-1, Mercury salicylate 6023-29-6 6275-02-1 6423-43-4 6427-21-0, Methoxymethyl isocyanate 6484-52-2, Nitric acid ammonium salt, properties 6484-52-2D, Ammonium nitrate, mixts. with fuel oils 6505-86-8, Nicotine sulfate 6659-60-5, 1,2,4-Butanetriol trinitrate 6842-15-5, Propylene tetramer 6867-30-7, Lithium acetylide ethylenediamine complex 7304-92-9 7332-16-3, Inositol hexanitrate 7429-90-5, Aluminum, miscellaneous 7429-90-5D, Aluminum, alkyl derivs. 7439-90-9, Krypton, miscellaneous 7439-92-1D, Lead, compds. 7439-93-2, Lithium, miscellaneous 7439-93-2D, Lithium, alkyl derivs. 7439-95-4, Magnesium, miscellaneous 7439-95-4D, Magnesium, alkyl derivs. 7439-97-6, Mercury, miscellaneous 7439-97-6D, Mercury, compds. 7440-01-9, Neon, miscellaneous 7440-09-7, Potassium, miscellaneous 7440-17-7, Rubidium, miscellaneous 7440-21-3, Silicon, miscellaneous 7440-23-5, Sodium, miscellaneous 7440-28-0D, Thallium, compds. 7440-29-1, Thorium, miscellaneous 7440-31-5D, Tin, organic compds. 7440-32-6, Titanium, properties 7440-36-0, Antimony, miscellaneous 7440-36-0D, Antimony, inorg. and organic compds. 7440-37-1, Argon, miscellaneous 7440-38-2, Arsenic, miscellaneous 7440-39-3,

Barium, miscellaneous 7440-39-3D, Barium, alloys 7440-39-3D, Barium, compds. 7440-41-7, Beryllium, miscellaneous 7440-41-7D, Beryllium, compds. 7440-43-9D, Cadmium, compds. 7440-44-0, Carbon, miscellaneous 7440-45-1, Cerium, miscellaneous 7440-46-2, Cesium, miscellaneous 7440-55-3, Gallium, miscellaneous 7440-58-6, Hafnium, miscellaneous 7440-59-7, Helium, miscellaneous 7440-61-1, Uranium, miscellaneous **7440-63-3, Xenon**, miscellaneous 7440-66-6, Zinc, miscellaneous 7440-67-7, Zirconium, miscellaneous 7440-70-2, Calcium, miscellaneous 7440-70-2D, Calcium, alloys 7446-09-5, Sulfur dioxide, miscellaneous 7446-11-9, Sulfur trioxide, miscellaneous 7446-14-2, Lead sulfate 7446-18-6, Thallium sulfate 7446-70-0, Aluminum chloride (AlCl3), miscellaneous 7487-94-7, Mercuric chloride, miscellaneous 7488-56-4, Selenium disulfide 7521-80-4, Butyltrichlorosilane 7550-45-0, Titanium tetrachloride, miscellaneous 7570-26-5, 1,2-Dinitroethane 7572-29-4, Dichloroacetylene 7578-36-1 7580-67-8, Lithium hydride 7601-89-0, Sodium perchlorate 7601-90-3, Perchloric acid, miscellaneous 7616-94-6, Perchloryl fluoride 7631-89-2, Sodium arsenate 7631-99-4, Sodium nitrate, miscellaneous 7632-00-0, Sodium nitrite 7632-51-1, Vanadium tetrachloride 7637-07-2, Boron trifluoride, miscellaneous 7645-25-2, Lead arsenate 7646-69-7, Sodium hydride
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IT 7646-78-8, Stannic chloride, miscellaneous 7646-85-7, Zinc chloride, miscellaneous 7646-93-7, Potassium hydrogen sulfate 7647-01-0, Hydrogen chloride, miscellaneous 7647-18-9, Antimony pentachloride 7647-19-0, Phosphorus pentafluoride 7664-38-2, Phosphoric acid, miscellaneous 7664-38-2D, Phosphoric acid, esters 7664-39-3, Hydrogen fluoride, miscellaneous 7664-41-7, Ammonia, miscellaneous 7664-93-9, Sulfuric acid, miscellaneous 7681-38-1, Sodium hydrogen sulfate 7681-49-4, Sodium fluoride, miscellaneous 7681-52-9, Sodium hypochlorite 7697-37-2, Nitric acid, miscellaneous 7704-34-9, Sulfur, miscellaneous 7705-07-9D, Titanium trichloride, mixts. 7705-08-0, Ferric chloride, miscellaneous 7718-98-1, Vanadium trichloride 7719-09-7, Thionyl chloride 7719-12-2, Phosphorus trichloride 7722-64-7, Potassium permanganate 7722-84-1, Hydrogen peroxide (H2O2), miscellaneous 7723-14-0, Phosphorus, miscellaneous 7726-95-6, Bromine, miscellaneous 7727-15-3, Aluminum bromide 7727-18-6, Vanadium oxytrichloride 7727-21-1, Potassium persulfate 7727-37-9, Nitrogen, miscellaneous 7727-37-9D, Nitrogen, mixts. with rare gases 7727-54-0, Ammonium persulfate 7738-94-5, Chromic acid (H2CrO4) 7756-94-7, Triisobutylene 7757-79-1, Potassium nitrate, miscellaneous 7758-01-2, Potassium bromate 7758-09-0, Potassium nitrite 7758-19-2, Sodium chlorite 7758-94-3, Ferrous chloride 7761-88-8, Silver nitrate, miscellaneous 7773-03-7, Potassium bisulfite 7775-09-9, Sodium chlorate 7775-14-6, Sodium dithionite 7778-39-4, Arsenic acid 7778-44-1, Calcium arsenate 7778-54-3, Calcium hypochlorite 7778-66-7 7778-74-7, Potassium perchlorate 7779-86-4, Zinc dithionite 7779-88-6, Zinc nitrate 7782-39-0, Deuterium, miscellaneous 7782-41-4, Fluorine, miscellaneous 7782-44-7, Oxygen, miscellaneous 7782-44-7D, Oxygen, mixts. with rare gases 7782-49-2, Selenium, miscellaneous 7782-50-5, Chlorine, miscellaneous 7782-65-2, Germane 7782-78-7, Nitrosylsulfuric acid 7782-79-8D, Hydrazoic acid, copper complexes 7782-99-2, Sulfurous acid, miscellaneous 7783-06-4, Hydrogen sulfide, miscellaneous 7783-07-5, Hydrogen selenide (H2Se) 7783-08-6, Selenic acid 7783-33-7 7783-41-7, Oxygen difluoride 7783-54-2, Nitrogen trifluoride 7783-56-4, Antimony trifluoride 7783-60-0, Sulfur tetrafluoride 7783-61-1, Silicon tetrafluoride 7783-66-6, Iodine pentafluoride 7783-70-2, Antimony pentafluoride 7783-79-1, Selenium hexafluoride

7783-80-4, Tellurium hexafluoride 7783-81-5, Uranium hexafluoride 7783-82-6, Tungsten hexafluoride 7783-91-7, Silver chlorite 7784-08-9 7784-21-6, Aluminum hydride 7784-30-7, Aluminum phosphate 7784-42-1, Arsine 7784-46-5, Sodium arsenite 7786-30-3D, Magnesium chloride (MgCl2), mixture with chlorates 7787-36-2, Barium permanganate 7787-41-9, Barium selenate 7787-71-5, Bromine trifluoride 7788-97-8, Chromic fluoride 7789-09-5, Ammonium dichromate 7789-18-6, Cesium nitrate 7789-21-1, Fluorosulfonic acid 7789-23-3, Potassium fluoride 7789-29-9, Potassium bifluoride 7789-30-2, Bromine pentafluoride 7789-38-0, Sodium bromate 7789-59-5, Phosphorus oxybromide 7789-60-8, Phosphorus tribromide 7789-61-9, Antimony tribromide 7789-69-7, Phosphorus pentabromide 7789-78-8, Calcium hydride 7790-59-2 7790-69-4, Lithium nitrate 7790-91-2, Chlorine trifluoride 7790-93-4, Chloric acid 7790-94-5, Chlorosulfonic acid 7790-98-9, Ammonium perchlorate 7790-99-0, Iodine monochloride 7791-10-8, Strontium chlorate 7791-23-3, Selenium oxychloride 7791-25-5, Sulfuryl chloride 7791-27-7, Disulfuryl chloride 7803-51-2, Phosphine 7803-52-3, Stibine 7803-54-5, Magnesium diamide 7803-55-6, Ammonium metavanadate 7803-57-8, Hydrazine hydrate 7803-62-5, Silane, miscellaneous 7803-63-6, Ammonium hydrogen sulfate 8004-09-9 8006-19-7, Amatol 8006-28-8, Soda lime 8007-56-5, Nitrohydrochloric acid 8007-58-7 8012-74-6, London Purple 8014-95-7, Fuming sulfuric acid 8049-17-0, Ferrosilicon 8050-88-2, Celluloid 8063-77-2 8065-53-0, Hexolite 8066-33-9, Pentolite 8070-50-6 9003-53-6, Polystyrene 9004-70-0, Collodion 9056-38-6, Nitrostarch 9080-17-5, Ammonium polysulfide 10022-31-8, Barium nitrate 10024-97-2, Nitrogen oxide (N2O), properties 10025-78-2, Trichlorosilane 10025-85-1, Nitrogen trichloride 10025-87-3, Phosphorus oxychloride 10025-91-9, Antimony trichloride 10026-04-7, Silicon tetrachloride 10026-11-6, Zirconium tetrachloride 10026-13-8, Phosphorus pentachloride 10031-13-7 10031-87-5, 2-Ethylbutyl acetate 10034-81-8, Magnesium perchlorate 10034-85-2, Hydrogen iodide 10035-10-6, Hydrogen bromide, miscellaneous 10039-54-0, Hydroxylamine sulfate 10042-76-9, Strontium nitrate 10045-94-0, Mercuric nitrate 10049-04-4, Chlorine dioxide 10099-74-8, Lead nitrate 10101-50-5 10102-06-4, Uranyl nitrate 10102-12-2, Selenium nitride 10102-18-8, Sodium selenite **10102-43-9**, **Nitric oxide**, miscellaneous 10102-44-0, Nitrogen dioxide, miscellaneous 10102-49-5, Ferric arsenate 10102-50-8, Ferrous arsenate 10103-50-1, Magnesium arsenate 10118-76-0 10124-37-5, Calcium nitrate 10124-48-8, Mercury ammonium chloride 10124-50-2, Potassium arsenite 10137-74-3, Calcium chlorate 10192-29-7, Ammonium chlorate 10241-05-1, Molybdenum pentachloride 10256-53-8, Methanamine, compound with trinitromethane, miscellaneous 10294-33-4, Boron tribromide 10294-34-5, Boron trichloride 10306-83-9 10326-21-3, Magnesium chlorate 10326-24-6 10361-95-2, Zinc chlorate 10377-60-3, Magnesium nitrate 10377-66-9, Manganese nitrate 10415-75-5, Mercurous nitrate 10421-48-4, Ferric nitrate 10431-47-7 10544-63-5, Ethyl crotonate 11069-19-5, Dichlorobutene 11071-47-9, Isooctene 11099-22-2 11105-16-1, Zirconium hydride 11122-26-2 11135-81-2 11138-49-1, Sodium aluminate 11140-68-4, Titanium hydride 12001-29-5, Chrysotile 12002-19-6, Mercury nucleate 12002-48-1, Trichlorobenzene 12030-88-5, Potassium superoxide 12031-80-0, Lithium peroxide 12033-49-7, Nitrogen trioxide 12034-12-7, Sodium superoxide 12057-74-8, Magnesium phosphide (Mg3P2) 12125-01-8, Ammonium fluoride 12135-76-1, Ammonium sulfide 12136-15-1, Mercury nitride 12164-94-2, Ammonium azide 12167-20-3, Nitrocresol 12172-67-7, Actinolite 12401-70-6, Potassium monoxide 12401-86-4, Sodium monoxide 12427-38-2, Maneb 12440-42-5, Tin phosphide (Sn3P4) 12504-16-4, Strontium phosphide (Sr3P2) 12627-52-0, Antimony sulfide 12627-52-0D, Antimony sulfide, mixture with chlorates 12640-89-0, Selenium oxide 12653-71-3, Mercury oxide 12737-18-7,

Calcium silicide 12751-03-0, Cordite 12771-08-3, Sulfur chloride 12789-46-7, Amyl acid phosphate 13092-75-6, Silver acetylide 13138-45-9 13225-10-0, α-Methylglucoside tetranitrate 13319-75-0, Boron trifluoride dihydrate 13410-01-0, Sodium selenate 13424-46-9, Lead azide 13426-91-0, Cupriethylenediamine 13437-80-4, Mercuric arsenate 13444-85-4, Nitrogen triiodide 13446-10-1, Ammonium permanganate 13446-48-5, Ammonium nitrite 13450-97-0, Strontium perchlorate 13453-30-0, Thallium chlorate 13463-39-3, Nickel carbonyl 13463-40-6, Iron pentacarbonyl 13464-33-0, Zinc arsenate 13464-58-9D, Arsenous acid, copper complexes 13465-73-1, Bromosilane 13465-95-7, Barium perchlorate 13472-08-7 13473-90-0, Aluminum nitrate
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT 13477-00-4, Barium chlorate 13477-10-6, Barium hypochlorite 13477-36-6, Calcium perchlorate 13520-83-7, Uranyl nitrate hexahydrate 13537-32-1, Fluorophosphoric acid 13548-38-4, Chromium nitrate 13597-54-1, Zinc selenate 13597-99-4, Beryllium nitrate 13598-36-2, Phosphonic acid 13637-63-3, Chlorine pentafluoride 13637-76-8, Lead perchlorate 13718-59-7 13746-89-9, Zirconium nitrate 13762-51-1, Potassium borohydride 13766-44-4, Mercury sulfate 13769-43-2, Potassium metavanadate 13770-96-2, Sodium aluminum hydride 13774-25-9 13779-41-4, Difluorophosphoric acid 13780-03-5, Calcium bisulfite 13823-29-5, Thorium nitrate 13840-33-0, Lithium hypochlorite 13840-33-0D, Lithium hypochlorite, mixts. 13843-59-9, Ammonium bromate 13863-88-2, Silver azide 13967-90-3, Barium bromate 13973-87-0, Bromine azide 13973-88-1, Chlorine azide 13987-01-4, Tripropylene 14014-86-9 14019-91-1, Calcium selenate 14293-73-3 14448-38-5, Hyponitrous acid 14519-07-4, Zinc bromate 14519-17-6, Magnesium bromate 14546-44-2, Hydrazine azide 14567-73-8, Tremolite 14644-61-2, Zirconium sulfate 14666-78-5, Diethylperoxydicarbonate 14674-72-7, Calcium chlorite 14696-82-3, Iodine azide (I(N3)) 14977-61-8 15195-06-9 15245-44-0, Lead trinitroresorcinate 15347-57-6, Lead acetate 15457-98-4 15512-36-4, Calcium dithionite 15545-97-8, 2,2'-Azodi(2,4-dimethyl-4-methoxyvaleronitile) 15598-34-2, Pyridine perchlorate 15718-71-5, Ethylenediamine diperchlorate 15825-70-4, Mannitol hexanitrate 15875-44-2, Methylamine perchlorate 16215-49-9, Di-n-butyl peroxydicarbonate 16229-43-9, Vanadyl sulfate 16339-86-9 16646-35-8 16721-80-5, Sodium hydrosulfide 16753-36-9, Copper acetylide 16853-85-3, Lithium aluminum hydride 16871-71-9, Zinc fluorosilicate 16871-90-2, Potassium fluorosilicate 16872-11-0 16893-85-9, Sodium fluorosilicate 16901-76-1, Thallium nitrate 16919-19-0, Ammonium fluorosilicate 16940-66-2, Sodium borohydride 16940-81-1, Hexafluorophosphoric acid 16941-12-1, Chloroplatinic acid 16949-15-8, Lithium borohydride 16949-65-8, Magnesium fluorosilicate 16961-83-4, Fluorosilicic acid 16962-07-5, Aluminum borohydride 17014-71-0, Potassium peroxide 17068-78-9, Anthophyllite 17462-58-7, sec-Butyl chloroformate 17639-93-9, Methyl-2-chloropropionate 17702-41-9, Decaborane 17861-62-0 18130-44-4, Titanium sulfate 18414-36-3 18810-58-7, Barium azide 19159-68-3 19287-45-7, Diborane 19287-45-7D, Diborane, mixts. 19624-22-7, Pentaborane 20062-22-0 20236-55-9, Barium styphnate 20600-96-8 20816-12-0, Osmium tetroxide 20820-44-4 20859-73-8, Aluminum phosphide 21351-79-1, Cesium hydroxide (Cs(OH)) 21569-01-7 21723-86-4 21985-87-5, Pentanitroaniline 22128-62-7, Chloromethylchloroformate 22750-93-2, Ethyl perchlorate 22751-24-2 22826-61-5 23414-72-4, Zinc permanganate 23745-86-0, Potassium fluoroacetate 24167-76-8, Sodium phosphide 24468-13-1, 2-Ethylhexylchloroformate 24884-69-3 25013-15-4, Vinyl toluene 25109-57-3 25134-21-8 25136-55-4, Dimethyldioxane 25154-42-1, Chlorobutane 25154-54-5, Dinitrobenzene 25155-15-1, Cymene

25167-20-8, Tetrabromoethane 25167-67-3, Butylene 25167-70-8, Diisobutylene 25167-80-0, Chlorophenol 25168-05-2, Chlorotoluene 25265-68-3, Methyltetrahydrofuran 25321-14-6, Dinitrotoluene 25322-01-4, Nitropropane 25322-20-7, Tetrachloroethane 25323-30-2, Dichloroethylene 25339-56-4, Heptene 25340-17-4, Diethylbenzene 25377-72-4, n-Amylene 25496-08-6, Fluorotoluene 25497-28-3, Difluoroethane 25497-29-4, Chlorodifluoroethane 25513-64-8 25550-53-2 25550-55-4, Dinitrosobenzene 25550-58-7, Dinitrophenol 25550-58-7D, Dinitrophenol, salts 25567-67-3, Chlorodinitrobenzene 25567-68-4, Chloronitrotoluene 25639-42-3, Methylcyclohexanol 25721-38-4, Lead picrate 25917-35-5, Hexanol 26134-62-3, Lithium nitride 26140-60-3D, Terphenyl, halo derivs. 26249-12-7, Dibromobenzene 26471-56-7, Dinitroaniline 26471-62-5, Toluene diisocyanate 26506-47-8, Copper chlorate 26571-79-9 26618-70-2 26628-22-8, Sodium azide 26638-19-7, Dichloropropane 26645-10-3 26760-64-5, Isopentene 26762-93-6 26914-02-3, Iodopropane 26915-12-8, Toluidine 26952-23-8, Dichloropropene 26952-42-1, Trinitroaniline 27134-26-5, Chloroaniline 27134-27-6, Dichloroaniline 27137-85-5, Dichlorophenyltrichlorosilane 27152-57-4 27176-87-0, Dodecylbenzenesulfonic acid 27195-67-1, Dimethylcyclohexane 27215-10-7 27236-46-0, Isohexene 27254-36-0, Nitronaphthalene 27458-20-4, Butyltoluene 27978-54-7, Hydrazine perchlorate 27986-95-4 27987-06-0, Trifluoroethane 28260-61-9, Trinitrochlorobenzene 28300-74-5, Antimony potassium tartrate 28324-52-9, Pinane hydroperoxide 28479-22-3 28653-16-9 28679-16-5, Trimethylhexamethylenediisocyanate 28805-86-9, Butylphenol 29191-52-4, Anisidine 29306-57-8 29790-52-1, Nicotine salicylate 29903-04-6 29965-97-7, Cyclooctadiene 30236-29-4, Sucrose octanitrate 30525-89-4, Paraformaldehyde 30553-04-9, Naphthylthiourea 30586-10-8, Dichloropentane 30586-18-6, Pentamethylheptane 31058-64-7 31212-28-9, Nitrobenzenesulfonic acid 33453-96-2 33864-17-4 34216-34-7, Trimethylcyclohexylamine 35296-72-1, Butanol 35860-50-5, Trinitrobenzoic acid 35860-51-6, Dinitroresorcinol 35884-77-6, Xylyl bromide 36472-34-1, Chloropropene 37020-93-2, Mercury cyanide (Hg(CN)) 37187-22-7, Acetyl acetone peroxide 37206-20-5, Methyl isobutyl ketone peroxide 37273-91-9, Metaldehyde 37320-91-5, Mercury iodide 37368-10-8, Aluminum vanadium oxide 38139-71-8, Bromide chloride 38232-63-2, Mercurous azide 38483-28-2, Methylene glycol dinitrate 39377-49-6, Copper cyanide 39377-56-5, Lead sulfide 39404-03-0, Magnesium silicide 39409-64-8, TVOPA 39432-81-0 39455-80-6, Ammonium sodium vanadium oxide 40058-87-5, Isopropyl-2-chloropropionate 41195-19-1 41587-36-4, Chloronitroaniline 42296-74-2, Hexadiene 43133-95-5, Methylpentane 50815-73-1 50874-93-6 51006-59-8 51023-22-4, Trichlorobutene 51064-12-1 51312-23-3, Mercury bromide 51317-24-9, Lead nitroresorcinate 51325-42-9, Copper selenite 51845-86-4, Ethyl borate 52181-51-8 53014-37-2, Tetranitroaniline 53408-91-6, Mercury thiocyanate 53422-49-4 53569-62-3 53839-08-0 53906-68-6 54141-09-2, 1,4,-Butynediol 54413-15-9, Tritonal 54727-89-8 54958-71-3 55510-04-8, Dinitroglycoluril 55810-17-8
RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
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IT 56929-36-3 56960-91-9 57607-37-1, Octolite 58164-88-8, Antimony lactate 58499-37-9 58933-55-4 59753-21-8 59917-23-6 60168-33-4 60616-74-2, Magnesium hydride 60869-68-3 60999-18-0 61061-91-4 61878-56-6 63085-06-3 63283-80-7, Dichloroisopropyl ether 63597-41-1, Octadiene 63885-01-8 63907-41-5 63937-14-4 63938-10-3, Chlorotetrafluoroethane 63988-31-8 64173-96-2 64973-06-4, Arsenic bromide 66634-68-2 67632-66-0 68833-55-6, Mercury acetylide (Hg(C2H)) 68848-64-6 68975-47-3, Isoheptene 69523-06-4, Ferrocerium

69782-73-6 70027-50-8, Copper selenate 70042-58-9, tert-Butylcyclohexylchloroformate 70268-38-1 70268-40-5 70281-33-3 70288-87-8 70288-89-0 70399-13-2, Lithium ferrosilicon 72672-48-1 73506-32-8, Hydrazine selenate 76080-77-8 77851-23-1 78369-83-2 79869-58-2, Propanethiol 81228-87-7, Cyclobutylchloroformate 82280-63-5 83267-52-1 84002-64-2 87686-42-8 90920-71-1 95332-73-3 98130-51-9 98205-29-9 100920-70-5 102437-81-0 105185-95-3 105554-30-1 109259-85-0 118833-38-8 125227-17-0 127795-79-3, Ammonium arsenate 131566-30-8, Potassium phosphide 132052-03-0, Pesticide S 134009-81-7, Fulminating platinum 134010-02-9, Fulminating silver 134115-62-1 134115-63-2, Piperazinedipropanamine 134115-64-3 134115-65-4 134115-66-5 134115-68-7 134115-69-8 134115-70-1 134115-70-1D, salts 134115-71-2 134115-72-3 134115-73-4 134115-74-5 134115-75-6 134115-76-7 134140-03-7 134140-11-7 134170-48-2 134191-17-6, Azaurolic acid 134191-62-1 134206-87-4 134206-88-5, Sodium chlorate-dinitrotoluene mixture 134206-89-6 134207-07-1 134226-92-9 134265-01-3 134282-14-7, Ammonium fulminate 134282-15-8 134282-16-9, 5-Azido-1-hydroxytetrazole 134282-17-0 134282-18-1 134282-19-2 134282-20-5 134282-21-6 134282-23-8, 1,9-Dinitroxypentamethylene-2,4,6,8-tetramine 134282-24-9 134282-25-0 134282-26-1 134282-27-2 134282-28-3 134282-30-7 134282-30-7D, salts 134282-31-8 134282-34-1 134282-35-2 134282-37-4 134282-38-5 134282-39-6 134282-40-9 134282-41-0 134282-42-1, 2,4,6-Trinitrophenyl guanidine 134282-43-2 134293-21-3 134293-22-4 134293-23-5 134293-24-6, 2,3,5,6-Tetranitroso-1,4-dinitrobenzene 134309-18-5 134318-55-1 134318-56-2 134356-41-5 134884-20-1, Aluminum magnesium phosphide 135072-82-1 135099-37-5 135991-25-2, Galactan trinitrate 135991-28-5 135991-41-2 135991-57-0

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT 78-11-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:628497 HCAPLUS
DOCUMENT NUMBER: 93:228497
TITLE: Kinetics of free radicals generated by IR laser photolysis. **IV**. Intersystem crossings and reactions of diatomic carbon (X1Σg+) and diatomic carbon (a3Πu) in the gaseous phase
AUTHOR(S): Reisler, H.; Mangir, M. S.; Wittig, C.
CORPORATE SOURCE: Dep. Electr. Eng., Univ. South. California, Los Angeles, CA, 90007, USA
SOURCE: Journal of Chemical Physics (**1980**), 73(5), 2280-6
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rate coeffs. at 300 K for the removal of C2(X1Σg+) and C2(a3IIu) (1C2 and 3C2, resp.) by H2, NO, and a number of hydrocarbons are reported, as well as rate coeffs. for intersystem crossing between 1C2 and 3C2 induced by collisions with N2, CO2, CF4, Ar, Kr, and Xe. C2 mols. were produced by IR photolysis of C2H3CN or C2HCl3, and their concns. were monitored by laser induced fluorescence. Collisionally induced intersystem crossing was significant only when it was spin allowed or involved heavy collision partners (e.g., Kr, Xe), 1C2 reacted more rapidly with NO than 3C2, and excited CN mols. in the A and B states were formed predominantly in

reactions of 3C2. 1C2 reactions resulted mainly in ground state CN. Radiationless transitions between the X and B states of CN, induced by collisions with Ar, were observed Both 1C2 and 3C2 were removed by hydrocarbons mainly via chemical reactions, and 1C2 reacted more rapidly than 3C2 for every case measured.

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic Processes)
Section cross-reference(s): 73

ST diatomic carbon singlet triplet reaction; kinetics carbon gas phase reaction; intersystem crossing rate diatomic carbon

IT Air pollution
Astrophysics
Atmosphere
(intersystem crossing and reactions of singlet and triplet mol. carbon with gases in relation to)

IT Fluorescence quenching
(of carbon radicals by hydrocarbons and gases, kinetics of)

IT Photolysis
(of trichloroethene and propenenitrile, singlet and triplet mol. carbon formation in, kinetics of)

IT Energy level
(singlet, of mol. carbon, reactivity of)

IT Energy level excitation
(triplet, of mol. carbon)

IT Energy level
(triplet, of mol. carbon, reactivity of)

IT 107-13-1, properties 25323-89-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(IR photolysis of, mol. carbon formation in)

IT 7439-90-9, properties 7440-37-1, properties **7440-63-3**, properties
RL: PRP (Properties)
(gas-phase interaction with singlet and triplet mol. carbon, intersystem crossing induced by, rate coeffs. of)

IT 71-43-2, reactions 74-82-8, reactions 74-84-0, reactions 74-86-2, reactions 74-98-6, reactions 74-99-7 75-00-3 124-38-9, reactions 127-18-4, reactions 353-36-6 593-53-3 1333-74-0, reactions 7727-37-9, reactions 7732-18-5, reactions **10102-43-9**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(gas-phase reaction of singlet and triplet mol. carbon with, rate coeffs. of)

IT 12070-15-4, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(intersystem crossing and gas phase reactions of, kinetics of)

L26 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:112703 HCAPLUS
DOCUMENT NUMBER: 88:112703
TITLE: Collisional quenching of electronically excited germanium atoms, {Ge[4p2(1S0)]}, by atomic absorption spectroscopy
AUTHOR(S): Chowdhury, Mohiuddin A.; Husain, David
CORPORATE SOURCE: Dep. Phys. Chem., Univ. Cambridge, Cambridge, UK
SOURCE: Journal of the Chemical Society, Faraday Transactions 2: Molecular and Chemical Physics (**1977**), 73(12), 1805-14
CODEN: JCFTBS; ISSN: 0300-9238
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Electronically excited Ge atoms Ge[4p2(1S0)], 2.029 eV above the 4p2(3P0)

ground state, were generated by pulsed irradiation of GeMe4 and monitored photoelec. in absorption by time-resolved attenuation of atomic resonance radiation at γ = 274.04 nm [4d(1P01) ← 4p2(1S0)]. Absolute 2nd-order rate consts. were determined for the collisional quenching of this atomic state by the gases Xe, H2, N2, CO, CO2, CH4, CF3H, C2H4, D2, O2, NO, N2O, CF4, SF6, C2H2 and GeMe4. The results were compared with analogous data for other Group **IV** atoms, and discussed, where appropriate, within the context of symmetry arguments on the nature of the potential surfaces involved on both the basis of the weak spin orbit coupling approximation and (J, Ω) coupling. The feasibility of constructing a pulsed laser based on the transition Ge(41S0) → Ge(41D2) (γ = 1.0820 μ) was considered in view of the population inversion observed between these 2 states in the expts.

CC 73-3 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)

ST germanium energy level quenching; laser germanium; methylgermanium photolysis

IT Lasers
(germanium, feasibility of pulsed)

IT Energy level transition
(quenching, of atomic germanium excited state by gases, kinetics of)

IT 74-82-8, properties 74-85-1, properties 75-46-7 124-38-9, properties 630-08-0, properties 865-52-1 1333-74-0, properties **7440-63-3**, properties 7727-37-9, properties 7782-39-0, properties
RL: PRP (Properties)
(collisional quenching by, of electronically excited atomic germanium)

IT 74-86-2, properties 75-73-0 2551-62-4 7782-44-7, properties 10024-97-2, properties **10102-43-9**, properties
RL: PRP (Properties)
(collisional quenching by, of electronically excited germanium)

IT 7440-56-4, properties
RL: PRP (Properties)
(collisional quenching of excited, kinetics of)

L26 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:147422 HCAPLUS
DOCUMENT NUMBER: 82:147422
TITLE: Collisional quenching of electronically excited tin atoms tin(51D2) by time-resolved atomic absorption spectroscopy
AUTHOR(S): Brown, A.; Husain, D.
CORPORATE SOURCE: Dep. Phys. Chem., Univ. Cambridge, Cambridge, UK
SOURCE: International Journal of Chemical Kinetics (**1975**), 7(1), 77-86
CODEN: IJCKBO; ISSN: 0538-8066
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Electronically excited Sn atoms (51D2), 1.068 eV above the 53P0 ground state, were generated by the pulsed irradiation of SnMe4 and monitored photoelec. in absorption by time-resolved attenuation of atomic resonance radiation at 285.06 nm [Sn((5d3F20) ← (5p2 1D2))]. Deactivation rate consts. are reported for the quenching of Sn(51D2) with a range of collision partners and the resulting data are compared with those for analogous states within Group **IV**, namely, C(21D2) and Pb(61D2). The data are discussed in terms of correlations based on both the weak and strong spin orbit coupling approxns.

CC 73-3 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)
Section cross-reference(s): 65

ST collision quenching tin; atomic absorption tin quenching

IT Spectrometry
(atomic absorption, in monitoring of collisional quenching of electronically excited tin atoms)
IT Energy level transition
(collisional deactivation, of electronically excited tin atoms)
IT 7440-31-5, properties
RL: PRP (Properties)
(collisional quenching of electronically excited)
IT 74-82-8, properties 74-85-1, properties 74-86-2, properties 124-38-9, properties 630-08-0, properties 1333-74-0, properties 7440-59-7, properties **7440-63-3**, properties 7727-37-9, properties 7782-44-7, properties 10024-97-2, properties **10102-43-9**, properties
RL: PRP (Properties)
(collisional quenching of electronically excited tin atoms by)

L26 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1969:31900 HCAPLUS
DOCUMENT NUMBER: 70:31900
TITLE: Ellipsometric investigation of physisorption at low temperatures
AUTHOR(S): Bootsma, G. A.; Meyer, F.
CORPORATE SOURCE: Philips Res. Lab., N.V. Philips' Gloeilampenfabrieken, Eindhoven, Neth.
SOURCE: Surface Science (**1969**), 13(1), 110-18
CODEN: SUSCAS; ISSN: 0039-6028
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ellipsometric method measures the change in the state of polarization of a light beam upon reflection. Linear extrapolation in the macroscopic theory of homogeneous layers to the submonolayer region predicts that adsorbed quantities corresponding to a small fraction of a monolayer can be detected on Ge and Si surfaces. This is shown exptl. by combined ellipsometric and volumetric measurements of the physisorption of Kr, Xe, CH4, silane, and NO on real surfaces at liquid N and O temps. The results of the expts. support the assumption of a linear, or nearly linear, relation between the ellipsometric signal δΔ and the degree of coverage. The values δΔm for monolayer coverages of the adsorbates on different adsorbents are determined by B.E.T. calcns. They are discussed in terms of mol. polarizabilities and cross sections.
CC 66 (Surface Chemistry and Colloids)
ST physisorption at low temps; ellipsometry physisorption; krypton physisorption; **xenon** physisorption; methane physisorption; silane physisorption; **nitric oxide** physisorption
IT Ellipsometry
(of gases adsorbed on group **IV**-A elements)
IT 7440-21-3, properties 7440-56-4, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption by, ellipsometric determination of gases in relation to)
IT 74-82-8, properties 7439-90-9, properties **7440-63-3**, properties 7803-62-5, properties **10102-43-9**, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(adsorption of, ellipsometric determination of)

L26 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1964:429428 HCAPLUS
DOCUMENT NUMBER: 61:29428
ORIGINAL REFERENCE NO.: 61:5101h,5102a-b
TITLE: Emission spectrum of NO in solid rare gases: the lifetime of the a 4II state and the spectrum of the a

4II → X 2II and B 2II → X 2II transitions.
AUTHOR(S): Frosch, R. P.; Robinson, G. W.
CORPORATE SOURCE: California Inst. of Technol., Pasadena
SOURCE: Journal of Chemical Physics (**1964**), 41(2), 367-74
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The emission spectrum of NO trapped in solid Ar and Kr was excited with x-rays. Two series of bands were observed, the well-known β bands (B 2II → X 2II) and a series with estimated origin near 38,000 cm.-1, believed to be the a 4II5/2 → X 2II3/2 transition. The lifetime of the assumed quartet state was measured in solid Ne, Ar, and Kr and found to be 156, 93, and 35 msec., resp., in these solids. These lifetimes are compatible with the above assignment of the bands. A least-sqs. fit was made of the spectral data to obtain the 0-0 band positions and the vibrational consts. of the NO mol. in the solid. The doublet-quartet bands arise from a spin-orbit mixing of the a 4II5/2 state with the B' 2Δ5/2 state. The possibility of observing high-resolution spectra of the a 4II-X 2II transition in either absorption or emission is considered. The role of the a 4II state of NO in photochem. reactions and in **auroral** and airglow spectra is briefly discussed.

CC 10 (Spectra and Some Other Optical Properties)

IT X-rays
(nitrogen oxide (NO) in Ar and Kr matrixes bombarded by, spectrum of)

IT Spectra, visible and ultraviolet
(of nitrogen oxide (NO), in Ar and Kr matrix bombarded by x-rays)

IT Energy levels
(of nitrogen oxide (NO), lifetimes of)

IT 7439-90-9, Krypton
(isotopes of masses 92 and 93, **xenon** spectrum in presence of)

IT **10102-43-9**, Nitrogen oxide, NO
(spectrum of, in Ar and Kr matrix bombarded by x-rays)

L26 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1963:57213 HCAPLUS
DOCUMENT NUMBER: 58:57213
ORIGINAL REFERENCE NO.: 58:9763b-c
TITLE: Pressure broadening studies on vibration-rotation bands. **IV**. Optical collision diameters for foreign-gas broadening of CO and DCl bands
AUTHOR(S): Crane-Robinson, C.; Thompson, H. W.
CORPORATE SOURCE: Univ. Oxford, UK
SOURCE: Proc. Roy. Soc. (London) (**1963**), Ser. A 272, 453-66
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Results are given for the pressure broadening of lines in the vibration-rotation bands of CO and DCl, by a wide variety of added gases, including both non-polar and polar mols. Optical collision diams. were calculated and considered in relation to the interaction forces likely to be involved. For CO, a rough correlation was found between the optical collision diameter and the interaction potential for non-polar broadeners where dispersion forces are dominant, but derivations occur with some polar broadeners. Similar data for DCl illustrate the importance of dipolar forces, but no simple theory explains the results satisfactorily. The variation of line width with J quantum number is discussed.

CC 10 (Spectra and Some Other Optical Properties)

IT Molecules
(rotation and vibration of, spectral line broadening and)
IT 7440-59-7, Helium
(carbon monoxide spectrum in)
IT 74-98-6, Propane 75-73-0, Carbon tetrafluoride 106-97-8, Butane 109-66-0, Pentane 463-82-1, Propane, 2,2-dimethyl- 2551-62-4, Sulfur fluoride, SF6 7439-90-9, Krypton 7440-01-9, Neon **7440-63-3**, **Xenon** 7647-01-0, Hydrochloric acid 7664-41-7, Ammonia **10102-43-9**, Nitrogen oxide, NO
(carbon monoxide spectrum in presence of)
IT 67-66-3, Chloroform
(hydrochloric acid-d spectrum in presence of)
IT 74-84-0, Ethane 124-38-9, Carbon dioxide 7440-37-1, Argon 7446-09-5, Sulfur dioxide
(spectra of CO and DCl in presence of)
IT 74-82-8, Methane 1333-74-0, Hydrogen 7782-44-7, Oxygen
(spectrum of CO and DCl in presence of)
IT 7727-37-9, Nitrogen
(spectrum of CO and DCl in relation to)
IT 630-08-0, Carbon monoxide 7698-05-7, Hydrochloric acid-d
(spectrum of, foreign-gas broadening of lines of)

L26 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1962:400497 HCAPLUS
DOCUMENT NUMBER: 57:497
ORIGINAL REFERENCE NO.: 57:79b-e
TITLE: Estimated viscosities and thermal conductivities of gases at high temperatures
AUTHOR(S): Svehla, Roger A.
CORPORATE SOURCE: Lewis Research Center, Cleveland, OH
SOURCE: NASA (Natl. Aeronaut. Space Admin.) Tech. Rept. (**1962**), R132, 140 pp.
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The title data are calculated for approx. 200 mols. and free radicals at 1005000°K. for 100° intervals and at 1 atmospheric The data are for pure gases in the ground state. Excited states are not considered in calculating transport properties; however, excited states are included in calculating heat capacities of mono- and some diat. gases. Calcns. for the transport coeffs. are based upon the Lennard-Jones (12-6) potential for all gases; the reasons for choosing this method over the Sutherland model and the Buckingham (exp-6) potential are discussed. Exptl. viscosity data, where available, are used to obtain force consts.; otherwise the consts. are estimated These consts. are used to calculate the tabulated viscosities and conds. An Eucken-type correction is made for thermal conds. of polyat. gases to correct for exchange between internal and translational energies. Although this correction is poor at lower temps., it improves with increasing temperature It is impossible to obtain exptl. thermal-conductivity data except for inert atoms, since most conductivity data are available only at low temps. (200400°K.), where the Eucken correction error is probably greatest. However, if the same set of force consts. is used for both viscosity and thermal conductivity, there is a large degree of cancellation of error when these properties are used in heat-transfer equations. 145 refs.
CC 3 (General Physical Chemistry)
IT Heat capacity
Viscosity
(calcn. of, of gases)
IT Conductivity, thermal and(or) Conduction, thermal

Force constants
(calcn. of, of gases at high temperature)
IT Crystallinity
(of ethylene polymers, thermal conductivity and)
IT Transport processes and properties
(of gases, at high temps., calcn. of)
IT Energy
(potential or potential functions, in transport property calcns. of gases at high temperature)
IT Air
(thermal conductivity and viscosity of, at high temperature)
IT BO
(thermal conductivity and viscosity at high temperature)
IT Beryllium bromide, compound with Et2O(1:2) system
(thermal conductivity and viscosity of, at high temperature)
IT 7784-18-1, Aluminum fluoride
(aluminum(I)-containing (AlF), thermal conductivity and viscosity of, at high temperature)
IT 7446-70-0, Aluminum chloride
(aluminum(I)-containing, thermal conductivity and viscosity of AlCl, at high temperature)
IT 1344-28-1, Aluminum oxide
(aluminum(II)-containing (AlO), thermal conductivity and viscosity of, at high temperature)
IT 7787-47-5, Beryllium chloride
(beryllium(I)-containing (BeCl), thermal conductivity and viscosity, at high temperature)
IT 7787-49-7, Beryllium fluoride
(beryllium(I)-containing (BeF), thermal conductivity and viscosity of, at high temperature)
IT 7647-01-0, Hydrochloric acid
(from vinyl chloride polymers, thermal conductivity and viscosity of, at high temperature)
IT 7439-90-9, Krypton
(isotopes of masses 92 and 93, thermal conductivity and viscosity of, at high temperature)
IT 7786-30-3, Magnesium chloride
(magnesium(I)-containing (MgCl), thermal conductivity and viscosity of, at high temperature)
IT 7783-40-6, Magnesium fluoride
(magnesium(I)-containing(MgF), thermal conductivity and viscosity of, at high temperature)
IT 74-86-2, Acetylene 74-90-8, Hydrocyanic acid 75-09-2, Methane, dichloro- 75-71-8, Methane, dichlorodifluoro- 1303-86-2, Boron oxide, B2O3 7429-90-5, Aluminum 7440-41-7, Beryllium **7440-63-3**, **Xenon** 7664-39-3, Hydrofluoric acid 7681-49-4, Sodium fluoride 7783-61-1, Silicon fluoride, SiF4 7790-89-8, Chlorine fluoride, ClF 7790-91-2, Chlorine fluoride, ClF3 10026-04-7, Silicon chloride, SiCl4 10294-34-5, Boron chloride, BCl3 12251-90-0, Aluminum sulfide, AlS 12504-41-5, Silicon sulfide, SiS 20583-55-5, Boron chloride, BCl
(thermal conductivity and viscosity at high temperature)
IT 7440-59-7, Helium 7447-41-8, Lithium chloride
(thermal conductivity and viscosity of)

IT 1313-59-3, Sodium oxide
(thermal conductivity and viscosity of Na2O or NaO at high temperature)
IT 56-23-5, Carbon tetrachloride 60-29-7, Ethyl ether 64-17-5, Ethyl alcohol 67-56-1, Methanol 67-64-1, Acetone 67-66-3, Chloroform 71-23-8, Propyl alcohol 71-43-2, Benzene 74-82-8, Methane 74-83-9, Methane, bromo- 74-84-0, Ethane 74-85-1, Ethylene 74-87-3, Methane, chloro- 74-88-4, Methane, iodo- 74-97-5, Methane, bromochloro- 74-98-6, Propane 74-99-7, Propyne 75-00-3, Ethane, chloro- 75-10-5, Methane, difluoro- 75-11-6, Methane, diiodo- 75-15-0, Carbon disulfide 75-19-4, Cyclopropane 75-25-2, Methane, tribromo- 75-27-4, Methane, bromodichloro- 75-28-5, Propane, 2-methyl- 75-45-6, Methane, chlorodifluoro- 75-46-7, Methane, trifluoro- 75-63-8, Methane, bromotrifluoro- 75-69-4, Methane, trichlorofluoro- 75-72-9, Methane, chlorotrifluoro- 75-73-0, Carbon tetrafluoride 79-20-9, Acetic acid, methyl ester 106-97-8, Butane 109-66-0, Pentane 110-54-3, Hexane 110-82-7, Cyclohexane 115-07-1, Propene 115-10-6, Methyl ether 121-43-7, Methyl borate, (MeO)3B 124-38-9, Carbon dioxide 141-78-6, Ethyl acetate 143-33-9, Sodium cyanide 460-19-5, Cyanogen 463-58-1, Carbonyl sulfide 463-82-1, Propane, 2,2-dimethyl- 506-77-4, Cyanogen chloride 558-13-4, Carbon tetrabromide 593-53-3, Methane, fluoro- 593-70-4, Methane, chlorofluoro- 593-98-6, Methane, bromochlorofluoro- 630-08-0, Carbon monoxide 1310-73-2, Sodium hydroxide 1333-74-0, Hydrogen 1495-50-7, Cyanogen fluoride 1605-72-7, Methylene, dichloro-, ion (CCl2+) 2074-87-5, Cyanogen 2154-59-8, Methylene, difluoro- 2264-21-3, Methyl, trifluoro- 2408-36-8, Lithium cyanide 2551-62-4, Sulfur fluoride, SF6 2696-92-6, Nitrosyl chloride 2944-05-0, Carbon sulfide, CS 3170-80-7, Methyl, trichloro- 3315-37-5, Methylidyne 3352-57-6, Hydroxyl 3889-75-6, Methylidyne, fluoro- 3889-76-7, Methylidyne, chloro- 7439-93-2, Lithium 7439-95-4, Magnesium 7439-97-6, Mercury 7440-01-9, Neon 7440-21-3, Silicon 7440-23-5, Sodium 7440-37-1, Argon 7440-43-9, Cadmium 7440-44-0, Carbon 7440-66-6, Zinc 7446-09-5, Sulfur dioxide 7487-94-7, Mercury chloride, HgCl2 7550-35-8, Lithium bromide 7553-56-2, Iodine 7631-86-9, Silica 7637-07-2, Boron fluoride 7646-78-8, Tin chloride, SnCl4 7647-15-6, Sodium bromide 7664-41-7, Ammonia 7681-82-5, Sodium iodide 7704-34-9, Sulfur 7719-12-2, Phosphorus chloride, PCl3 7722-84-1, Hydrogen peroxide 7723-14-0, Phosphorus 7726-95-6, Bromine 7727-37-9, Nitrogen 7732-18-5, Water 7774-29-0, Mercury iodide, HgI2 7782-44-7, Oxygen 7782-50-5, Chlorine 7783-06-4, Hydrogen sulfide (H2S) 7783-41-7, Oxygen fluoride, OF2 7783-54-2, Nitrogen fluoride, NF3 7783-55-3, Phosphorus fluoride, PF3 7783-81-5, Uranium fluoride, UF6 7784-42-1, Arsine 7787-53-3, Beryllium iodide 7787-71-5, Bromine fluoride, BrF3 7789-24-4, Lithium fluoride 7789-47-1, Mercury bromide, HgBr2 7789-67-5, Tin bromide, SnBr4 7790-99-0, Iodine chloride, ICl 7803-51-2, Phosphine 7803-62-5, Silane 10024-97-2, Nitrogen oxide, N2O 10034-85-2, Hydriodic acid 10035-10-6, Hydrobromic acid **10102-43-9**, Nitrogen oxide, NO 10294-33-4, Boron bromide, BBr3 10377-51-2, Lithium iodide 11128-24-8, Silicon fluoride, SiF 12057-24-8, Lithium oxide 12061-70-0, Oxygen fluoride, OF 12142-77-7, Lithium oxide, monoxide (LiO) 12210-38-7, Sulfur oxide, SO, ion 12281-36-6, Phosphorus sulfide, PS 12326-85-1, Carbon phosphide, CP 13517-10-7, Boron iodide, BI3 13709-35-8, Sulfur fluoride, S2F2 13768-60-0, Boron, monofluoride 13774-92-0, Imidogen (NH) 13863-59-7, Bromine fluoride, BrF 13940-21-1, Mercapto (HS) 13966-57-9, Silicon chloride, SiCl 14049-36-6, Silane, chlorotrifluoro- 14452-66-5, Phosphorus oxide, **PO** 14762-51-7, Sodium chloride, rock salt 14965-52-7, Silane, trichlorofluoro- 14989-30-1, Chlorine oxide, ClO 16027-92-2, Phosphorus fluoride, PF 17167-55-4, Phosphorus chloride, PCl 17739-47-8, Phosphorus nitride, PN 18356-71-3, Silane, dichlorodifluoro- 21255-83-4, Bromine oxide, Br2O 24304-00-5, Aluminum nitride, AlN

113443-18-8, Silicon oxide (SiO) 570400-21-4, Boron alloys, Hf-Mo-Ti-V-Zr-
(thermal conductivity and viscosity of, at high temperature)
IT 9002-88-4, Ethylene polymers
(thermal conductivity of, crystallinity and)
IT 19287-45-7, Diborane(6)
(thermal, conductivity and viscosity of, at high temperature)

L26 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1954:75437 HCAPLUS
DOCUMENT NUMBER: 48:75437
ORIGINAL REFERENCE NO.: 48:13307c-d
TITLE: Physical chemistry of univariant fluid systems. **IV**. The vapor pressure at the critical points
AUTHOR(S): Pinter, Tomislav
CORPORATE SOURCE: Med. Fac., Zagreb, Yugoslavia
SOURCE: Arhiv Kem. (**1953**), 25, 195-203
DOCUMENT TYPE: Journal
LANGUAGE: German
AB cf. C.A. 47, 7849f. The reduced equations of state are derived for the various expressions for the gas law. By use of $p(v - b) = RT$ as the gas equation, and Eggert's equation $\lambda/T = \Delta S = f(Tk - T)/T$, it is shown that $dP/dp = a(Tk + \varepsilon - T)/b(Tk - T)2$, where p is the total pressure on the liquid, P the vapor pressure at temperature T, Tk the critical temperature, λ the molar heat of vaporization, ΔS the entropy change, and $a = f/Tk$. The constant ε is defined from the term $\Delta S = a(Tk + \varepsilon - T)$, and is a small constant such that when T = Tk, ΔS is greater than zero.
CC 2 (General and Physical Chemistry)
IT Vapor pressure
(at critical points)
IT Water vapor
(equation of state for)
IT Equation of state
(reduced, for expressions of gas law)
IT Critical constants
(temperature, vapor pressure at)
IT Systems
(univariant fluid)
IT Entropy
Heat of vaporization
(vapor pressure and, at critical points)
IT 60-29-7, Ethyl ether 74-82-8, Methane 74-84-0, Ethane 74-85-1, Ethylene 74-98-6, Propane 75-28-5, Propane, 2-methyl- 78-78-4, Butane, 2-methyl- 109-66-0, Pentane 110-54-3, Hexane 115-07-1, Propene 115-11-7, Propene, 2-methyl- 124-38-9, Carbon dioxide 142-82-5, Heptane 593-53-3, Methane, fluoro- 630-08-0, Carbon monoxide 1333-74-0, Hydrogen 7440-01-9, Neon 7440-59-7, Helium **7440-63-3**, **Xenon** 7727-37-9, Nitrogen 7782-39-0, Deuterium 7782-44-7, Oxygen 7783-06-4, Hydrogen sulfide **10102-43-9**, Nitrogen oxide, NO
(equation of state for)

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=> d que stat l16
L8            1 SEA FILE=REGISTRY ABB=ON  XENON/CN
L9            1 SEA FILE=REGISTRY ABB=ON  NITRIC OXIDE/CN
L10         590 SEA FILE=HCAPLUS ABB=ON  (L8 OR ?XENON?) AND (L9 OR ?NITRIC?(W)
                ?OXIDE?)
L11          24 SEA FILE=HCAPLUS ABB=ON  L10 AND (?ORAL? OR PO OR ?MOUTH? OR
                IV OR ?INTRAVEN?)
L12           1 SEA FILE=HCAPLUS ABB=ON  L11 AND ?VASOSPASM?
L13          24 SEA FILE=HCAPLUS ABB=ON  L11 OR L12
L15          26 SEA L13
L16          21 DUP REMOV L15 (5 DUPLICATES REMOVED)

=> d ibib abs l16 1-21

L16  ANSWER 1 OF 21  EMBASE  COPYRIGHT (c) 2006 Elsevier B.V. All rights
     reserved on STN
ACCESSION NUMBER:   2005243160  EMBASE
TITLE:              The concept of anaesthetic-induced cardioprotection:
                    Mechanisms of action.
AUTHOR:             Weber N.C.; Schlack W.
CORPORATE SOURCE:   Dr. N.C. Weber, Department of Anaesthesiology, University
                    of Dusseldorf, Moorenstrasse 5, 40225 Dusseldorf, Germany.
                    nina.weber@uni-duesseldorf.de
SOURCE:             Best Practice and Research in Clinical Anaesthesiology,
                    (2005) Vol. 19, No. 3 SPEC. ISS., pp. 429-443.
                    Refs: 96
                    ISSN: 1521-6896  CODEN: BPRCD8
PUBLISHER IDENT.:   S 1521-6896(05)00010-8
COUNTRY:            United Kingdom
DOCUMENT TYPE:      Journal; General Review
FILE SEGMENT:       018     Cardiovascular Diseases and Cardiovascular Surgery
                    024     Anesthesiology
                    029     Clinical Biochemistry
                    030     Pharmacology
                    037     Drug Literature Index
LANGUAGE:           English
SUMMARY LANGUAGE:   English
ENTRY DATE:         Entered STN: 20050616
                    Last Updated on STN: 20050616
AB   The mechanisms by which ischaemia reperfusion injury can be influenced
     have been the subject of extensive research in the last decades.  Early
     restoration of arterial blood flow and surgical measures to improve the
     ischaemic tolerance of the tissue are the main therapeutic options
     currently in clinical use.  In experimental settings ischaemic
     preconditioning has been described as protecting the heart, but the
     practical relevance of interventions by ischaemic preconditioning is
     strongly limited to these experimental situations.  However, ischaemia
     reperfusion of the heart routinely occurs in a variety of clinical
     situations, such as during transplantations, coronary artery bypass
     grafting or vascular surgery.  Moreover, ischaemia reperfusion injury
     occurs without any surgical intervention as a transient myocardial
     ischaemia during a stressful anaesthetic induction.  Besides ischaemic
     preconditioning, another form of preconditioning was discovered over 10
     years ago: the anaesthetic-induced preconditioning.  There is increasing
     evidence that anaesthetic agents can interact with the underlying
     pathomechanisms of ischaemia reperfusion injury and protect the myocardium
     by a preconditioning mechanism.  Hence, the anaesthetist himself can
     substantially influence the critical situation of ischaemia reperfusion
     during the operation by choosing the right anaesthetic.  A better
     understanding of the underlying mechanisms of anaesthetic-induced
```

cardioprotection not only reflects an important increase in scientific knowledge but may also offer the new perspective of using different anaesthetics for targeted intraoperative myocardial protection. There are three time windows when a substance may interact with the ischaemia reperfusion injury process: (1) during ischaemia, (2) after ischaemia (i.e. during reperfusion), and (3) before ischaemia (preconditioning).

L16 ANSWER 2 OF 21 EMBASE

ACCESSION NUMBER: 2005153693 EMBASE
TITLE: Current concepts in the pathophysiology and treatment of inhalation injury.
AUTHOR: Cancio L.C.
CORPORATE SOURCE: L.C. Cancio, US Army Inst. of Surgical Research, 3400 Rawley E. Chambers Avenue, Fort Sam Houston, TX 78234-6315, United States. Lee.Cancio@amedd.army.mil
SOURCE: Trauma, (2005) Vol. 7, No. 1, pp. 19-35.
Refs: 166
ISSN: 1460-4086 CODEN: TLUKAA
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20050421
Last Updated on STN: 20050421

AB Smoke inhalation injury occurs in about 10% of patients admitted to burn centres, and increases the mortality of burn patients by up to 20% over predictions based on age and burn size alone. The primary lesion in smoke inhalation injury is localized to the small airways, with alveolar injury and pulmonary oedema exercising a less prominent role during the initial phases. Injury incites a cascade of events that include ventilation-perfusion mismatch, secondary lung injury, systemic inflammation, impaired immune function, and pneumonia. The most important recent developments in the treatment of inhalation injury have included improved methods of pulmonary care targeted at the pathophysiology of the injury, such as high-frequency percussive ventilation and gentle mechanical ventilation.

L16 ANSWER 3 OF 21 MEDLINE on STN

ACCESSION NUMBER: 2003067150 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12552201
TITLE: Despite in vitro increase in cyclic guanosine monophosphate concentrations, intracarotid nitroprusside fails to augment cerebral blood flow of healthy baboons.
AUTHOR: Joshi Shailendra; Hartl Roger; Sun Lena S; Libow Adam D; Wang Mei; Pile-Spellman John; Young William L; Connolly E Sander; Hirshman Carol A
CORPORATE SOURCE: Department of Anesthesiology, College of Physicians and Surgeons of Columbia University, New York, New York 10032, USA.. sj121@columbia.edu
CONTRACT NUMBER: K08 GM 00698 (NIGMS)
SOURCE: Anesthesiology, (2003 Feb) 98 (2) 412-9.
Journal code: 1300217. ISSN: 0003-3022.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20030212
Last Updated on STN: 20030226
Entered Medline: 20030225

AB BACKGROUND: During cerebral angiography, intracarotid infusion of sodium nitroprusside (SNP), an endothelium-independent **nitric oxide** donor, fails to increase cerebral blood flow (CBF) of human subjects. A confounding effect of intracranial pathology or that of radiocontrast could not be ruled out in these experiments. The authors hypothesized that, if **nitric oxide** was a significant regulator of CBF of primates, then intracarotid SNP will augment CBF of baboons. METHODS: In studies, CBF (intraarterial (133)Xe technique) was measured in healthy baboons during isoflurane anesthesia at (1) baseline and during (2) induced hypertension with **intravenous** phenylephrine, (3) concurrent infusions of **intravenous** phenylephrine and intracarotid SNP, and (4) intracarotid verapamil (positive control drug). In studies, the authors measured tissue cyclic guanosine monophosphate (cGMP) by radioimmunoassay after incubating vascular rings obtained from freshly killed baboons (1) with increasing concentrations of SNP and (2) after SNP exposure following preincubation with the radiocontrast agent, iohexhol. RESULTS: In the studies, coinfusion of **intravenous** phenylephrine and intracarotid SNP did not increase CBF. However, intracarotid verapamil significantly increased CBF (from 26 +/- 7 to 43 +/- 11 ml x 100 g(-1) x min(-1); $P < 0.0001$) without a change in mean arterial pressure. In the studies, incubation of intracranial arterial rings in SNP resulted in dose-dependent increases in cGMP concentrations. A similar increase in cGMP content was evident despite iohexhol preincubation. CONCLUSIONS: Collectively, these results suggest that, in healthy baboons, intracarotid SNP does not decrease arteriolar resistance, although SNP could affect proximal arterial tone, as demonstrated by the increase in cGMP content of these vessels.

L16 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002715542 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12477710
TITLE: Migraine can be induced by sildenafil without changes in middle cerebral artery diameter.
AUTHOR: Kruuse Christina; Thomsen Lars Lykke; Birk Steffen; Olesen Jes
CORPORATE SOURCE: Department of Neurology, Glostrup Hospital, University of Copenhagen, Glostrup, Copenhagen, Denmark.. ckruuse@dadlnet.dk
SOURCE: Brain; a journal of neurology, (2003 Jan) 126 (Pt 1) 241-7. Journal code: 0372537. ISSN: 0006-8950.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 20021217
Last Updated on STN: 20030321
Entered Medline: 20030320

AB Migraine is considered a neurovascular disease involving dilatation of cerebral arteries. **Nitric oxide** (NO) donors induce

dilatation of cerebral and extracranial arteries and migraine, but NO has several mechanisms of action in addition to its cyclic guanosine monophosphate (cGMP)-mediated vasodilatation. We examined whether sildenafil (Viagra), a selective inhibitor of cGMP-hydrolysing phosphodiesterase 5 (PDE5), which acts exclusively by increasing cGMP, can induce migraine and dilatation of cerebral arteries. We included 12 patients with migraine without aura in this double-blind, placebo-controlled crossover study, in which placebo or sildenafil 100 mg was administered **orally** on two separate days. Blood flow velocity in the middle cerebral artery (V(mca)) was recorded by transcranial Doppler ultrasonography and regional cerebral blood flow in the territory of the middle cerebral artery (rCBF(mca)) was measured using SPECT (single photon emission computed tomography) and **xenon** 133 inhalation. Radial and **temporal** artery diameters were studied using high-frequency ultrasonography. Headache response, tenderness of pericranial muscles, blood pressure and heart rate were measured repeatedly. We found that migraine attack was induced by sildenafil in 10 of 12 migraine patients and by placebo in two of 12 patients (P = 0.01). V(mca) (P = 0.1) and rCBF(mca) (P = 0.93) remained unchanged after sildenafil. **Temporal** (P = 0.47) and radial (P = 0.87) artery diameter and pericranial tenderness (P = 0.16) were unaffected by sildenafil. Systolic and diastolic blood pressures were unchanged but heart rate increased from a mean of 62 +/- 2 to 74 +/- 3 beats/min (P = 0.01) after sildenafil. Our results demonstrate that migraine may be induced via a cGMP-dependent mechanism, and we show for the first time that this occurs without initial dilatation of the middle cerebral artery. We propose that triggering mechanisms may reside within the perivascular sensory nerve terminals or the brainstem. However, other sites of action may also be possible and future studies are needed to elucidate this. In the clinical use of sildenafil, patients who have migraine should be informed about the risk of migraine attacks.

L16 ANSWER 5 OF 21 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2002452531 EMBASE
TITLE: Malignant hyperthermia: A pharmacogenetic disease of Ca(++) regulating proteins.
AUTHOR: Nelson T.E.
CORPORATE SOURCE: T.E. Nelson, Department of Anesthesiology, Wake Forest Univ. School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157-1009, United States. tnelson@wfubmc.edu
SOURCE: Current Molecular Medicine, (2002) Vol. 2, No. 4, pp. 347-369.
Refs: 117
ISSN: 1566-5240 CODEN: CMMUBP
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
022 Human Genetics
024 Anesthesiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20030103
Last Updated on STN: 20030103

AB Malignant hyperthermia (MH) is a pharmacogenetic, life-threatening hypermetabolic syndrome in genetically predisposed individuals exposed to certain anesthetic agents. Discovered by Denborough and Lovell [1] in 1960, MH was associated with high mortality and morbidity as the cause was

unknown and an effective treatment was unavailable. There is no classic clinical presentation of the syndrome, and the onset and signs of MH are dependent upon known and unknown environmental and genetic factors. Initial theories involved central temperature regulation defects or uncoupling of oxidative phosphorylation in mitochondria [2], but later investigations targeted skeletal muscle as the affected organ. Subsequently freshly biopsied skeletal muscle was used for in vitro pharmacologic contracture testing to discriminate between normal and MH-affected muscle and remains the "gold-standard" for MH diagnosis. Spontaneous, genetic models for MH were discovered in pigs and dogs and substantial knowledge about MH was gained from these valuable resources. The abnormal contracture response of MH skeletal muscle evoked a focus on calcium regulation, and abnormalities in calcium release (as opposed to calcium sequestration) mechanisms were discovered. About this same time the major calcium release channel in the skeletal muscle sarcoplasmic reticulum membrane was purified and named the ryanodine receptor [3]. Although the ryanodine receptor represents one of the largest functional proteins, the enormous gene encoding the 5021 amino acids comprising the ryanodine receptor subunit was eventually cloned [4,5]. Patient and dedicated work on the ryanodine receptor gene has found linkage to MH in the pig [6], dog [7], and among several different mutations and MH in unrelated human families [8,9]. Expression of these mutations in HEK cells has resulted in abnormal calcium release [10,11], supporting but not proving a causal basis for MH. In this review each of the areas mentioned above is discussed in detail revealing a wonderful success story that changed the anesthesiologist's "worst nightmare" from a syndrome with high mortality and morbidity to a reasonably well managed disease today. This success story includes unraveling the molecular basis for the disease and brings its pathoetiologic and diagnostic aspects toward molecular genetic resolution.

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ACCESSION NUMBER: 2003032563 EMBASE
TITLE: The effect of **nitric oxide** in testicular ischemia-reperfusion injury.
AUTHOR: Barlas M.; Hatiboglu C.
CORPORATE SOURCE: Dr. M. Barlas, Ankaralilar cad. 499, sok No. 22, Cayyolu 06530, Ankara, Turkey
SOURCE: International Urology and Nephrology, (2002) Vol. 34, No. 1, pp. 81-86.
Refs: 21
ISSN: 0301-1623 CODEN: IURNAE
COUNTRY: Hungary
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 028 Urology and Nephrology
005 General Pathology and Pathological Anatomy
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20030130
Last Updated on STN: 20030130

AB This experiment was carried out to investigate the effect of endogenous **nitric oxide** (NO) on the ischemia-reperfusion injury of testis. Testicular ischemia was achieved by twisting the right testis and spermatic cord 1080 counter-clockwise for 30 minutes and reperfusion was allowed for 30 minutes after detorsion of 33 rats. Animals were treated with normal saline in controls just before detorsion, NG-nitro-L-arginine methyl ester (L-NAME), and L-arginine (L-arg) in others. The tissue

damage was evaluated with light microscopy, malondialdehyde (MDA) level in tissue, and the blood flow measurement using (133)**xenon** (Xe) clearance technique. MDA indicator of reperfusion injury increased 25% after detorsion when only normal saline was given, L-NAME further increased MDA, L-arginin decreased MDA to control level. Conclusion: L-arginin infusion during the detorsion reduced the reperfusion injury of testis and improved the testicular blood flow after the detorsion.

L16 ANSWER 7 OF 21 EMBASE

ACCESSION NUMBER: 2002014203 EMBASE
TITLE: Intracarotid nitroprusside does not augment cerebral blood flow in human subjects.
AUTHOR: Joshi S.; Young W.L.; Duong H.; Aagaard B.A.; Ostapkovich N.D.; Connolly E.S.; Pile-Spellman J.
CORPORATE SOURCE: Dr. S. Joshi, Department of Anesthesiology, College of Physicians and Surgeons, Columbia University, 630 West 168th Street, New York, NY 10032, United States. sjl21@columbia.edu
SOURCE: Anesthesiology, (2002) Vol. 96, No. 1, pp. 60-66.
Refs: 55
ISSN: 0003-3022 CODEN: ANESAV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
008 Neurology and Neurosurgery
024 Anesthesiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20020131
Last Updated on STN: 20020131

AB Background: The recent resurgence of interest in the cerebrovascular effects of nitroprusside can be attributed to the possibility of using **nitric oxide** donors in treating cerebrovascular insufficiency. However, limited human data suggest that intracarotid nitroprusside does not directly affect cerebrovascular resistance. In previous studies, physiologic or pharmacologic reactivity of the preparation was not tested at the time of nitroprusside challenge. The authors hypothesized that if **nitric oxide** is a potent modulator of human cerebral blood flow (CBF), then intracarotid infusion of nitroprusside will augment CBF. Methods: Cerebral blood flow was measured (intraarterial (133)Xe technique) in sedated human subjects undergoing cerebral angiography during sequential infusions of (1) intracarotid saline, (2) **intravenous** phenylephrine to induce systemic hypertension, (3) **intravenous** phenylephrine with intracarotid nitroprusside (0.5 μg .ovrhdot. kg(-1) .ovrhdot. min(-1)), and (4) intracarotid verapamil (0.013 mg .ovrhdot. kg(-1) .ovrhdot. min(-1)). Data (mean ± SD) were analyzed by repeated-measures analysis of variance and post hoc Bonferroni-Dunn test. Results: **Intravenous** phenylephrine increased systemic mean arterial pressure (from 83 ± 12 to 98 ± 6 mmHg; n = 8; P < 0.001), and concurrent infusion of **intravenous** phenylephrine and intracarotid nitroprusside reversed this effect. However, compared with baseline, CBF did not change with **intravenous** phenylephrine or with concurrent infusions of **intravenous** phenylephrine and intracarotid nitroprusside. Intracarotid verapamil increased CBF (43 ± 9 to 65 ± 11 ml .ovrhdot. 100 g(-1) .ovrhdot. min(-1); P < 0.05). Conclusions: The authors conclude that, in humans, intracarotid nitroprusside sufficient to decrease mean arterial pressure during

recirculation, does not augment CBF. Failure of intracarotid nitroprusside to augment CBF despite demonstrable autoregulatory vasoconstriction and pharmacologic vasodilation questions the significance of **nitric oxide**-mediated vasodilation in human cerebral circulation.

L16 ANSWER 8 OF 21 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:120215 BIOSIS
DOCUMENT NUMBER: PREV200300120215
TITLE: Intraarterial Verapamil Decreases Vascular Resistance in Conductance Arteries of Human Subjects.
AUTHOR(S): Joshi, Shailendra [Reprint Author]; Meyers, Philip [Reprint Author]; Wang, Mei [Reprint Author]; Sahlein, Daniel [Reprint Author]; Pile-Spellman, John [Reprint Author]
CORPORATE SOURCE: Anesthesiology, Columbia University, New York, NY, USA
SOURCE: Anesthesiology Abstracts of Scientific Papers Annual Meeting, (2002) No. 2002, pp. Abstract No. A-269. http://www.asa-abstracts.com. cd-rom.
Meeting Info.: 2002 Annual Meeting of the American Society of Anesthesiologists. Orlando, FL, USA. October 12-16, 2002. American Society of Anesthesiologists Inc.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Mar 2003
Last Updated on STN: 5 Mar 2003

AB Introduction: Reactivity of cerebral arteries may be a function of their size and location. For example, in rodents, large cerebral arteries are sensitive while smaller arterioles are relatively resistant to **nitric-oxide** modulation. We have developed a novel method to study the segmental effects of intracarotid drug infusions in human subjects. The model broadly charaterizes arteries into two conceptually discrete groups: proximal or conductance arteries and distal resistance arterioles. It involves measurements of arterial pressures and cerebral blood flow (CBF) in response to intracarotid (IC) drugs. The arterial pressures are measured simultaneously at two places in the cerebral circulation: in the internal carotid artery (ICA) and M-2 segment of the middle cerebral artery (MCA). Hemispheric CBF (ml/100g/min) is determined by intraarterial 133Xe injection technique. To test our protocol we used IC infusion of verapamil, a clacium channel blocker, that increases CBF. Methods: Neurologically stable ASA I and II patients undergoing angiography under sedation were the subject of this study. ICA was cannulated via the **transfemoral** route. A small microcatheter was then floated into distal M-2 segment of the MCA. Two Cd/Te scintillation detectors were positioned over the MCA distribution to record 133Xe washout. CBF, and hemodynamic data was recorded during the IC infusions of normal saline and verapamil (1 mg/min) for five minutes. At the end of the infusion, the total dose of verapamil dispensed was recorded from the syringe pump. Calculations: To detemine the changes in proximal MCA resistance we measured CVR at two locations. CVR proximal (CVR-P) was determined by dividing ICA pressure/133Xe CBF. Distal CVR (CVR-D) was determined by dividing microcatheter pressure/133Xe CBF. The resistance of the MCA segment was determined from CVR-P and CVR-D. Statistical analysis was done with repeated-measures ANOVA, post-hoc Fisher PLSD test and linear regression. Results: Data from five patients who completed the protocol is presently available for analysis. Intraarterial verapamil significantly decreased coaxial (74 +- 19 vs 67 +- 19 mm Hg, P=.02), and microcatheter (68 +- 23 vs 61 +- 22 mm Hg, P= 0.02) pressures. It resulted in a significant increase in CBF 42 +- 15 vs 55 +- 8 ml/100g/min, P= 0.02). Both CVR-P (2.0 to 1.2 mm Hg/ml/min, P=0.03) and

CVR-D (1.8 +- .9 to 1.1 +- .4 mm Hg/ml/min, P=0.03) decreased during verapamil infusion. Proximal MCA resist. (%-base) decreased during IC verapamil infusion in direct proportion to the delivered dose, that ranged fro 2.5 to 6 mg (%-change in proximal MCA resist = 61 -25*dose, r2= .845, P=0.02). Conclusions: It is feasible to investigate segmental effects of IC drug infusions by measuring changes in pressure gradients within the arterial tree and 133Xe CBF. The model provides an important tool to study in-vivo reactivity of human cerebral vessels. In this particular instance, our results show that IC verapamil decreased conductance vascular resistance in proportion to delivered dose.

L16 ANSWER 9 OF 21 EMBASE

ACCESSION NUMBER: 2001103919 EMBASE
TITLE: Differential **nitric oxide** synthase activity, cofactor availability and cGMP accumulation in the central nervous system during anaesthesia.
AUTHOR: Galley H.F.; Le Cras A.E.; Logan S.D.; Webster N.R.
CORPORATE SOURCE: H.F. Galley, Academic Unit of Anaest./Inten. Care, Universtiy of Aberdeen, Foresterhill, Aberdeen AB25 2ZD, United Kingdom
SOURCE: British Journal of Anaesthesia, (2001) Vol. 86, No. 3, pp. 388-394.
Refs: 27
ISSN: 0007-0912 CODEN: BJANAD
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
024 Anesthesiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20010406
Last Updated on STN: 20010406

AB We investigated the effects of anaesthesia on dynamic **nitric oxide** production, concentrations of tetrahydrobiopterin and the accumulation of cyclic GMP (cGMP) in the rat central nervous system (CNS). Rats were assigned to anaesthesia with halothane, isoflurane, pentobarbital, diazepam, ketamine or **xenon** (n=6 per group). After 30 min, [(14)C]l-arginine (i.v.) was given and, after a further 60 min of anaesthesia, rats were killed and exposed immediately to focused microwave radiation. After removal of the brain and spinal cord, **nitric oxide** production from radiolabelled arginine (and hence **nitric oxide** synthase activity during anaesthesia) was measured as [(14)C]l-citrulline by scintillation counting. cGMP was determined by enzyme immunoassay and tetrahydrobiopterin by fluorescence HPLC, in brain regions and the spinal cord. **Nitric oxide** synthase activity was similar in all brain regions but was lower in the spinal cord, and was unaffected by anaesthesia. cGMP was similar in all areas of the CNS and was significantly decreased in rats anaesthetized with halothane. Isoflurane produced similar effects. In contrast, ketamine and **xenon** anaesthesia increased cGMP in the spinal cord, brainstem and hippocampus. Diazepam and pentobarbital had no effect. Tetrahydrobiopterin concentrations were similar in all areas of the CNS and were increased in the cortex and hippocampus after anaesthesia. We have shown profound differential effects of anaesthesia on the **nitric oxide** pathway in the rat CNS.

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ACCESSION NUMBER: 2001235113 EMBASE
TITLE: Effects of dihydroergotamine on intracranial pressure, cerebral blood flow, and cerebral metabolism in patients undergoing craniotomy for brain tumors.
AUTHOR: Bundgaard H.; Von Oettingen G.; Jorgensen H.A.; Jensen K.; Cold G.E.
CORPORATE SOURCE: Dr. H. Bundgaard, Department of Neuroanesthesia, Aarhus University Hospital, 8000 Aarhus C, Denmark
SOURCE: Journal of Neurosurgical Anesthesiology, (2001) Vol. 13, No. 3, pp. 195-201.
Refs: 22
ISSN: 0898-4921 CODEN: JNANEV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
009 Surgery
024 Anesthesiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20010719
Last Updated on STN: 20010719

AB In a search for a nonsurgical intervention to control intracranial hypertension during craniotomy, the authors studied the effects of dihydroergotamine on mean arterial blood pressure (MABP), intracranial pressure (ICP), cerebral perfusion pressure (CPP), cerebral blood flow (CBF), and cerebral metabolism in patients who underwent craniotomy for supratentorial brain tumors. Twenty patients were randomized to receive either dihydroergotamine 0.25 mg **intravenously** or placebo as a bolus dose during craniotomy. Anesthesia was induced with thiopental/fentanyl/atracurium, and maintained with isoflurane/N(2)O/fentanyl at normocapnia. After removal of the bone flap and exposure of intact dura, ICP was measured subdurally and dihydroergotamine/placebo was administered. Intracranial pressure and MABP were measured continuously. Cerebral blood flow (after **intravenous** administration of (133)Xe) and arteriojugular venous difference of oxygen (AVDO(2)) were measured before, and 30 minutes after, dihydroergotamine/placebo administration. Cerebral metabolic rate of oxygen (CMRO(2)) was calculated. After administration of dihydroergotamine, a significant increase in MABP from 74 to 87 mm Hg (median) and CPP from 65 to 72 mm Hg (median) were found. Simultaneously to the increase in MABP, a significant increase in ICP from 9.5 to 11.5 mm Fig (median) was disclosed, whereas no significant differences in CBF, AVDO(2), or CMRO(2) were found. Intracranial pressure was significantly higher after dihydroergotamine than after placebo. In conclusion, no ICP decreasing effect of a bolus dose of dihydroergotamine was found when administered to patients with brain tumors during isoflurane/N(2)O anesthesia. Corresponding increases in MABP and ICP suggest that abolished cerebral autoregulation might explain why dihydroergotamine was associated with an ICP increase.

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ACCESSION NUMBER: 2000177634 EMBASE
TITLE: **Nitric oxide** production by tumour tissue: Impact on the response to photodynamic therapy.
AUTHOR: Korbelik M.; Parkins C.S.; Shibuya H.; Cecic I.; Stratford M.R.L.; Chaplin D.J.

CORPORATE SOURCE: M. Korbelik, Cancer Imaging Department, British Columbia Cancer Agency, 601 West 10th Avenue, Vancouver, BC, Canada
SOURCE: British Journal of Cancer, (2000) Vol. 82, No. 11, pp. 1835-1843.
Refs: 57
ISSN: 0007-0920 CODEN: BJCAAI
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20000608
Last Updated on STN: 20000608

AB The role of **nitric oxide** (NO) in the response to Photofrin-based photodynamic therapy (PDT) was investigated using mouse tumour models characterized by either relatively high or low endogenous NO production (RIF and SCCVII vs EMT6 and FsaR, respectively). The NO synthase inhibitors N(ω)-nitro-L-arginine (L-NNA) or N(ω)-nitro-L-arginine methyl ester (L-NAME), administered to mice immediately after PDT light treatment of subcutaneously growing tumours, markedly enhanced the cure rate of RIF and SCCVII models, but produced no obvious benefit with the EMT6 and FsaR models. Laser Doppler flowmetry measurement revealed that both L-NNA and L-NAME strongly inhibit blood flow in RIF and SCCVII tumours, but not in EMT6 and FsaR tumours. When injected **intravenously** immediately after PDT light treatment, L-NAME dramatically augmented the decrease in blood flow in SCCVII tumours induced by PDT. The pattern of blood flow alterations in tumours following PDT indicates that, even with curative doses, regular circulation may be restored in some vessels after episodes of partial or complete obstruction. Such conditions are conducive to the induction of ischaemia-reperfusion injury, which is instigated by the formation of superoxide radical. The administration of superoxide dismutase immediately after PDT resulted in a decrease in tumour cure rates, thus confirming the involvement of superoxide in the anti-tumour effect. The results of this study demonstrate that NO participates in the events associated with PDT-mediated tumour destruction, particularly in the vascular response that is of critical importance for the curative outcome of this therapy. The level of endogenous production of NO in tumours appears to be one of the determinants of sensitivity to PDT. (C) 2000 Cancer Research Campaign.

L16 ANSWER 12 OF 21 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:221346 BIOSIS
DOCUMENT NUMBER: PREV200000221346
TITLE: Abstinence from drink ameliorated cerebral blood flow and vasoreactivity in patients with chronic alcoholism.
AUTHOR(S): Onoda, A. [Reprint author]; Maruki, Y. [Reprint author]; Matsuzaki, M. [Reprint author]; Narabayasi, Y. [Reprint author]; Sawada, M. [Reprint author]; Iwasaki, A. [Reprint author]; Enokida, M. [Reprint author]; Kanaya, M.; Akiyama, H.; Yamauchi, T.
CORPORATE SOURCE: Department of Neurology, Saitama Neuropsychiatric Institute, Yono, Japan
SOURCE: Keio Journal of Medicine, (Feb., 2000) Vol. 49, No. Suppl. 1, pp. A107-A108. print.
CODEN: KJMEA9. ISSN: 0022-9717.
DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 31 May 2000
Last Updated on STN: 5 Jan 2002

AB High dose ethanol consumption is a risk factor for both ishemic and hemorrhagic cerebrovasucular disease. This link between heavy drinkers and the risk factor of stroke has been considered as hypertension, liver dysfunction, abnormality of platelet function or other unknown mechanisms. Recently some of the experimental study suggest that direct action of ethanol on the inhibition of the synthesis/release of **nitric oxide** from endothelium and neurons may contribute to this link. Few studies in this field, however, were performed clinically. We examined cerebral blood flow(CBF) and vaso-reactivity in the patients with chronic alcoholism on abstinence from drink. CBF of nine male patients were measured by use of stable Xe-CT method before and after acetazolamide load. Regional CBF increased in second measurement after abstinence, but there were no significant changed statistically. However, %vaso-reactivity in right ACA and MCA significantly improved. We considered that large brain vessels dilated then small vessels could response to acetazolamide.

L16 ANSWER 13 OF 21 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:277958 BIOSIS
DOCUMENT NUMBER: PREV199800277958
TITLE: Advances in anaesthesiology in the 90-ies.
AUTHOR(S): Incze, Ferenc [Reprint author]
CORPORATE SOURCE: Gyulai Pal u.2, Budapest 1085, Hungary
SOURCE: Orvosi Hetilap, (April 26, 1998) Vol. 139, No. 17, pp. 1003-1010. print.
CODEN: ORHEAG. ISSN: 0030-6002.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: Hungarian
ENTRY DATE: Entered STN: 24 Jun 1998
Last Updated on STN: 13 Aug 1998

AB Author looks over the novelties in anaesthesiology in the 90-ies; (1) effort to relief not only the postoperative, but in general, every kind of pain; (2) publication of evidence based guidelines; (3) standpoints according to perioperative risk factors; (4) conception of preemptive analgesia; (5) usage of modern brain imaging techniques in anaesthesiology also; (6) researches about the sites, where general anaesthetics exert their effect; (7) new volatile anaesthetics (desflurane, sevoflurane); (8) researches, targeting the use of **xenon**; (9) new i.v. anaesthetics-analgesics (propofol, remifentanil, S(+)-ketamine, eltanolone) and their administration (TCI); (10) potential interactions between NO and anaesthetic agents; (11) new neuromuscular blocking drugs (mivacurium, rocuronium, cis-atracurium) and the new possibilities of neuromuscular monitoring; (12) question of difficult intubation (McCoy and bullard laringoscopes, laryngeal mask); (13) synthesis of the new elements for the challenges of the surgical practice: the anaesthesiological solution of laparoscopic surgery, one-day surgery, minimally invasive heart-surgery; (14) TIVA (recognition of awareness during operation); (15) closed circuit anaesthesia; (16) reduction of expenses; (17) application of computer and data management techniques; (18) organizational steps in order to achieve an integrated standard throughout the country.

L16 ANSWER 14 OF 21 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 1998272726 EMBASE
TITLE: Cerebral blood flow and CO2 reactivity is similar during

remifentanil/N2O and fentanyl/N2O anesthesia.
AUTHOR: Ostapkovich N.D.; Baker K.Z.; Fogarty-Mack P.; Sisti M.B.; Young W.L.
CORPORATE SOURCE: Dr. W.L. Young, Department of Anesthesia, Columbia Univ. Coll. of Physi./Surg., P and S Box 46, 630 West 168th Street, New York, NY 10032, United States. WLY1@columbia.edu
SOURCE: Anesthesiology, (1998) Vol. 89, No. 2, pp. 358-363. Refs: 16
ISSN: 0003-3022 CODEN: ANESAV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
024 Anesthesiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19980910
Last Updated on STN: 19980910

AB Background: Remifentanil, a rapidly metabolized μ-opioid agonist, may offer advantages for neurosurgical procedures in which prolonged anesthetic effects can delay assessment of the patient. This study compared the effects of remifentanil-nitrous oxide on cerebral blood flow (CBF) and carbon dioxide reactivity with those of fentanyl-nitrous oxide anesthesia during craniotomy. Methods: After institutional approval and informed patient consent were obtained, 23 patients scheduled to undergo supratentorial tumor surgery were randomly assigned to remifentanil or fentanyl infusion groups in a double- blinded manner. Midazolam, thiopental, and pancuronium induction was followed by equipotent narcotic loading infusions of remifentanil (1 μg · kg-1 · min-1) or fentanyl (2 μg · kg-1 · min-1) for 5-10 min. Patients were ventilated with 2:1 nitrous oxide-oxygen, and opioid rates were reduced and then titrated to a stable hemodynamic effect. After dural exposure, CBF was measured by the **intravenous 133xenon** technique at normocapnia and hypocapnia. Reactivity of CBF to carbon dioxide was calculated as the absolute increase in CBF per millimeters of mercury increase in the partial pressure of carbon dioxide (Pa(CO2)). Data were analyzed by repeated- measures analysis of variance, unpaired Student's t tests, or contingency analysis. Results: In the remifentanil group (n = 10), CBF decreased from 36 ± 11 to 27 ± 8 ml · 100 g-1 · min-1 as Pa(CO2) decreased from 33 ± 5 to 25 ± 2 mmHg. In the fentanyl group (n = 8), CBF decreased from 37 ± 11 to 25 ± 6 ml · 100 g-1 · min-1 as Pa(CO2) decreased from 34 ± 3 to 25 ± 3 mmHg. Absolute carbon dioxide reactivity was preserved with both agents: 1 ± 1.2 ml · 100 g-1 · min-1 · mmHg-1 for remifentanil and 1.5 ± 0.5 ml · 100 g-1 · min-1 · mmHg-1 for fentanyl (P = 0.318). Conclusion: Remifentanil and fentanyl have similar effects on absolute CBF, and cerebrovascular carbon dioxide reactivity is maintained.

L16 ANSWER 15 OF 21 EMBASE
ACCESSION NUMBER: 97279342 EMBASE
DOCUMENT NUMBER: 1997279342
TITLE: Cerebral blood flow and energy metabolism in the newborn.
AUTHOR: Greisen G.
CORPORATE SOURCE: Dr. G. Greisen, Department of Neonatology, Rigshospitalet, Blegdamsvej 9, DK-2100 Copenhagen 0, Denmark
SOURCE: Clinics in Perinatology, (1997) Vol. 24, No. 3, pp. 531-546.

Refs: 94
ISSN: 0095-5108 CODEN: CLPEDL
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 002 Physiology
007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
014 Radiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 971016
Last Updated on STN: 971016

AB In normal newborn term and preterm infants CBF is relatively low corresponding to a low metabolic rate for oxygen, whereas cross-brain oxygen extraction is similar to that in adults. This provides for a considerable reserve capacity to deal with decreased CBF or decreased oxygen content in arterial blood. CBF reactivity to CO2 is normal, and the evidence is that pressure-flow autoregulation is present, even in very preterm infants. Absence of autoregulation and CBF-CO2 reactivity has been documented in severely asphyxiated infants, and in preterm infants who went on to develop severe intracranial hemorrhage. A number of methods are available to study CBF and brain metabolism in newborn infants. Several of them involve ionizing radiation, which has limited their use, even though it is unlikely that the associated risks are particularly high. Magnetic resonance spectroscopy has demonstrated a delayed disturbance of energy metabolism following severe asphyxia. Doppler ultrasound has rarely been helpful to obtain quantitative data. Near infrared spectroscopy has now been in use for more than 10 years. It has been slow to fulfill its promise as a continuous monitor of cerebral circulation and of oxygen sufficiency of neurons.

L16 ANSWER 16 OF 21 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 96285442 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8674343
TITLE: Cerebrospinal fluid and plasma nitrite and nitrate concentrations after head injury in humans.
AUTHOR: Clark R S; Kochanek P M; Obrist W D; Wong H R; Billiar T R; Wisniewski S R; Marion D W
CORPORATE SOURCE: Department of Anesthesiology, Safar Center for Resuscitation Research, University of Pittsburgh, PA 15260, USA.
CONTRACT NUMBER: 2P50 NS30318-04A1 (NINDS)
NS 30318 (NINDS)
SOURCE: Critical care medicine, (1996 Jul) 24 (7) 1243-51.
Journal code: 0355501. ISSN: 0090-3493.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199608
ENTRY DATE: Entered STN: 19960822
Last Updated on STN: 20000303
Entered Medline: 19960809

AB OBJECTIVES: To measure cerebrospinal fluid and plasma nitrite and nitrate concentrations as indicators of **nitric oxide** production in adults after severe closed-head injury. To determine if there is an association between cerebrospinal fluid and plasma nitrite and

nitrate concentrations, and cerebral blood flow, arterio-jugular oxygen content difference, injury severity, and outcome after severe closed-head injury. DESIGN: A prospective, clinical study. SETTING: Multidisciplinary intensive care unit. PATIENTS: Fifteen comatose (Glasgow Coma Scale score of < or = 7) adult patients with severe closed-head injury were studied during the prospective, randomized evaluation of the effect of moderate hypothermia (32 degrees C for 24 hrs) on neurologic outcome after closed-head injury. Seven patients were in the hypothermic group and eight patients were in the normothermic treatment group. INTERVENTIONS: None. MEASUREMENTS AND MAIN RESULTS: Patients were examined sequentially, every 12 hrs for 2 days. **Intraventricular** cerebrospinal fluid was assayed for nitrite and nitrate concentrations. Cerebral blood flow was measured by the **133xenon intravenous** method. Simultaneous blood samples were obtained for measurements of arterio-jugular oxygen content difference and plasma nitrite and nitrate concentrations. Cerebral metabolic rate for oxygen was calculated. Cerebrospinal fluid nitrite and nitrate concentrations were highest at 30 to 42 hrs vs. 6 to 18, 18 to 30, and 42 to 54 hrs (26.4 +/- 3.3 vs. 17.3 +/- 2.1, 20.0 +/- 2.2, and 18.8 +/- 2.4 microM, respectively, p < .05). There was no difference over time in plasma nitrite and nitrate concentrations. Cerebral blood flow was increased and arterio-jugular oxygen content difference was reduced at 18 to 30, 30 to 42, and 42 to 54 hrs vs. 6 to 18 hrs (p < .05). At 30 to 42 hrs, cerebrospinal fluid nitrite and nitrate concentrations were 80% higher in patients who died vs. survivors (36.4 +/- 3.2 vs. 20.2 +/- 3.6, p < .05). Using a generalized, multivariate, linear regression model, both plasma nitrite and nitrate concentrations and injury Severity Score independently predicted cerebrospinal fluid nitrite and nitrate concentrations (p < .00001 and p = .0053, respectively). Cerebral blood flow and arterio-jugular oxygen content difference were not associated with cerebrospinal fluid or plasma nitrite and nitrate concentrations using this model. Cerebrospinal fluid nitrite and nitrate concentrations were increased over time in hypothermic vs. normothermic patients. But, where this difference occurred could not be determined by multiple comparisons (p = .03). The hypothermic patients had lower admission Glasgow Coma Scale scores than normothermic patients (p = .04) and tended to have higher injury Severity Scores (p = .09). CONCLUSIONS: Increases in cerebrospinal fluid nitrite and nitrate concentrations peaked at 30 to 42 hrs after severe closed-head injury. This increase in cerebrospinal fluid nitrite and nitrate concentrations was greater in nonsurvivors. Also, cerebrospinal fluid and plasma nitrite and nitrate concentrations were associated with injury Severity Score, suggesting that increased **nitric oxide** production in the brain is associated with injury severity and death. Hypothermia did not prevent the increase in cerebrospinal fluid nitrite and nitrate concentrations. Further study is required to determine the source of this increase in cerebrospinal fluid nitrite and nitrate concentrations and to further define the relationship to outcome and the effect of hypothermia on this process.

L16 ANSWER 17 OF 21 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 97106940 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8949688
TITLE: Limited role for **nitric oxide** in mediating cerebrovascular control of newborn piglets.
AUTHOR: Patel J; Pryds O; Roberts I; Harris D; Edwards A D
CORPORATE SOURCE: Royal Postgraduate Medical School, Hammersmith Hospital, London.
SOURCE: Archives of disease in childhood. Fetal and neonatal edition, (1996 Sep) 75 (2) F82-6.
Journal code: 9501297. ISSN: 1359-2998.

PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19970107

AB AIMS: To investigate the effects of the **nitric oxide** (NO) synthase inhibitor L-nitro-arginine methyl ester (L-NAME) on cerebral blood flow, and its response to alterations in arterial carbon dioxide tension (CBF-CO2 reactivity). METHODS: Cerebral blood flow was measured six times at varying arterial carbon dioxide tension (PaCO2) using the **intravenous 133Xenon** clearance technique in eight mechanically ventilated piglets of less than 24 hours postnatal age. After the third measurement L-NAME was administered as a bolus (20 mg/kg) and subsequently infused (10 mg/kg/hour). RESULTS: PaCO2 ranged between 2.7-8.9 kPa. Cerebral blood flow decreased by 14.0% (95% confidence interval 1.9-27.4) after L-NAME. CBF-CO2 reactivity was 18.4% per kPa (95% CI 14.1-22.2) before L-NAME and 15.2%/kPa (95% CI 11.1-19.3) afterwards; the difference between the CBF-CO2 reactivities was 3.2%/kPa (95% CI -0.4-6.8): these were not significantly different. CONCLUSIONS: Inhibition of **nitric oxide** synthesis reduces cerebral blood flow no more than a 0.5-1.0 kPa fall in PaCO2. **Nitric oxide** is not an important mediator of CBF-CO2 reactivity.

L16 ANSWER 18 OF 21 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 96290606 EMBASE
DOCUMENT NUMBER: 1996290606
TITLE: Limited role for **nitric oxide** in mediating cerebrovascular control of newborn piglets.
AUTHOR: Patel J.; Pryds O.; Roberts I.; Harris D.; Edwards A.D.
CORPORATE SOURCE: Department Neonatology, State University Hospital, Brendstrupgardsvej,8200 Aarhus N, Denmark
SOURCE: Archives of Disease in Childhood, (1996) Vol. 75, No. 3 SUPPL., pp. F82-F86.
ISSN: 0003-9888 CODEN: ADCHAK
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 007 Pediatrics and Pediatric Surgery
024 Anesthesiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 961106
Last Updated on STN: 961106

AB Aims - To investigate the effects of the **nitric oxide** (NO) synthase inhibitor L-nitro-arginine methyl ester (L-NAME) on cerebral blood flow, and its response to alterations in arterial carbon dioxide tension (CBF-CO2 reactivity). Methods - Cerebral blood flow was measured six times at varying arterial carbon dioxide tension (PaCO2) using the **intravenous 133Xenon** clearance technique in eight mechanically ventilated piglets of less than 24 hours postnatal age. After the third measurement L-NAME was administered as a bolus (20 mg/kg) and subsequently infused (10 mg/kg/hour). Results - PaCO2 ranged between 2.7-8.9 kPa. Cerebral blood flow decreased by 14.0% (95% confidence interval 1.9-27.4) after L-NAME. CBF-CO2 reactivity was 18.4% per kPa (95% CI 14.1-22.2) before L-NAME and 15.2%/kPa (95% CI 11.1-19.3) afterwards; the difference between the CBF-CO2 reactivities was 3.2%/kPa

(95% CI -0.4-6.8): these were not significantly different. Conclusions-Inhibition of **nitric oxide** synthesis reduces cerebral blood flow no more than a 0.5-1.0 kPa fall in PaCO2. **Nitric oxide** is not an important mediator of CBF-CO2 reactivity.

L16 ANSWER 19 OF 21 EMBASE

ACCESSION NUMBER: 94101930 EMBASE
DOCUMENT NUMBER: 1994101930
TITLE: Comparison of the effects of N(G)-nitro-L-arginine and indomethacin on the hypercapnic cerebral blood flow increase in rats.
AUTHOR: Wang Q.; Pelligrino D.A.; Paulson O.B.; Lassen N.A.
CORPORATE SOURCE: Department of Anesthesiology, Michael Reese Hospital, 2929 S. Ellis Ave,Chicago, IL 60616, United States
SOURCE: Brain Research, (1994) Vol. 641, No. 2, pp. 257-264. ISSN: 0006-8993 CODEN: BRREAP
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 940427
Last Updated on STN: 940427

AB The effects of N(G)-nitro-L-arginine (NOLAG), an inhibitor of **nitric oxide** synthase (NOS), and of indomethacin, an inhibitor of cyclooxygenase, on the rise in cerebral blood flow (CBF) accompanying increasing levels of hypercapnia (p(a)CO2 = 40-135 mmHg) were studied in anesthetized rats. CBF was measured by intracarotid injection of 133Xe. Progressive increases in p(a)CO2 of 10 mmHg, at intervals of about 8-10 minutes, were associated with gradual increases in CBF until a p(a)CO2 level of 115 mmHg was reached. No further CBF changes (from the maximum value of 446 ± 70 ml 100 g-1 min-1) were seen with additional step increase in p(a)CO2. Intracarotid infusion of 7.5 mg/kg NOLAG significantly attenuated the CO2-elicited CBF increase by about 45-65% at p(a)CO2 values below 115 mmHg. Beyond this level, there was a lesser inhibition of about 27-35%. 30 mg/kg NOLAG had essentially the same effect as 7.5 mg/kg NOLAG. 50 mg/kg NOLAG, given intraperitoneally (i.p.) twice daily for 4 days, also caused an attenuated CBF response to CO2, but the inhibitory effect was significantly less than with acute NOLAG administration in the PaCO2 range of 61-90 mmHg. Infusion of L-arginine, 1 g/kg/h, prevented the effect of 7.5 mg/kg NOLAG. Indomethacin, 10 mg/kg, i.v. produced a more dramatic attenuation of the response, to the extent that the steady rising curve of CBF as a function of PaCO2 was almost completely abolished. With indomethacin, a moderate increase (50%) in CBF was seen at the lowest level of hypercapnia, but raising PaCO2 above this level did not result in further increases in CBF. This effect could not be prevented by L-arginine. When combining 7.5 mg/kg NOLAG with 10 mg/kg indomethacin, the response to hypercapnia was totally blocked. The results suggest that NOLAG and indomethacin act through different mechanisms on the hypercapnic CBF response, and that indomethacin is the more powerful inhibitor.

L16 ANSWER 20 OF 21 EMBASE

ACCESSION NUMBER: 94288601 EMBASE
DOCUMENT NUMBER: 1994288601

TITLE: **Nitric oxide** (NO) is an endogenous anticonvulsant but not a mediator of the increase in cerebral blood flow accompanying bicuculline-induced seizures in rats.
AUTHOR: Wang Q.; Theard M.A.; Pelligrino D.A.; Baughman V.L.; Hoffman W.E.; Albrecht R.F.; Cwik M.; Paulson O.B.; Lassen N.A.
CORPORATE SOURCE: Department of Anesthesiology, Michael Reese Hospital, 2929 South Ellis Avenue,Chicago, IL 60616, United States
SOURCE: Brain Research, (1994) Vol. 658, No. 1-2, pp. 192-198. ISSN: 0006-8993 CODEN: BRREAP
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
050 Epilepsy
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 941019
Last Updated on STN: 941019

AB Neurons synthesize NO, which may act as a retrograde messenger, involved in either potentiating or depressing neuronal excitability. NO may also play a role in the cerebral vasodilatory response to increased neuronal activity (i.e., seizures). In this study, two questions were asked: (1) is NO an endogenous anticonvulsant or proconvulsant substance? and (2) is the cerebral blood flow (CBF) increase accompanying bicuculline (BC)-induced seizures mediated by NO? The experiments were performed in 300-400-g Wistar rats anesthetized with 0.6% halothane and 70% N20/30% O2- CBF was measured using the intracarotid 133Xe clearance method or laser-Doppler flowmetry. EEG activity was recorded. Chronic treatment (4 days) with nitro-L-arginine (L-NA), a potent NO synthase (NOS) inhibitor (400 mg/kg total), suppressed brain NOS by > 97% and prolonged seizure duration from 6 ± 1 (saline-treated controls) to 12 ± 2 min. In the L-NA-treated group, the CBF increase was sustained as long as seizure activity remained, indicating that CBF was still tightly coupled to seizure activity. Interestingly, the supposed inactive enantiomer of L-NA, D-NA, also showed an inhibition of brain NOS activity, ranging from 87 to 100%. The duration of seizures in this group (average 8 ± 2 min) corresponded directly to the magnitude of reduction in NOS activity ($r = 0.83$, $P < 0.05$). Specifically, the D-NA results indicated that NOS inhibition had to exceed 95% before any effect on seizure duration could be seen. Additional results demonstrated that only a total dose of 400 mg/kg of L-NA, given chronically was capable of prolonging the BC-induced CBF increase. With acute doses of 5 and 30 mg/kg L-NA, the time course of CBF changes after BC administration was not different from the control. These findings suggest that endogenous NO acts as an anticonvulsant perhaps via a negative feedback mechanism at the NMDA receptor. NO, however, does not appear to couple neuronal activation to increased CBF in this model.

L16 ANSWER 21 OF 21 EMBASE
ACCESSION NUMBER: 92356869 EMBASE
DOCUMENT NUMBER: 1992356869
TITLE: Inhibitors of **nitric oxide** synthase selectively reduce flow in tumour-associated neovasculature.
AUTHOR: Andrade S.P.; Hart I.R.; Piper P.J.
CORPORATE SOURCE: Biology of Metastasis Laboratory, Imperial Cancer Research

Fund, Lincoln's Inn Fields,London WC2A 3PX, United Kingdom
SOURCE: British Journal of Pharmacology, (1992) Vol. 107, No. 4, pp. 1092-1095.
ISSN: 0007-1188 CODEN: BJPCBM
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
023 Nuclear Medicine
048 Gastroenterology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 921227
Last Updated on STN: 921227

AB 1. The effects of L-arginine analogues, N(G)-nitro-L-arginine methyl ester (L-NAME) and N(G)-monomethyl-L-arginine (L-NMMA) and methylene blue on blood flow in a murine adenocarcinoma and melanoma have been investigated. 2. Sponge implants in Balb/c and C57/BL mice were used to host proliferating tumour cells while the washout of 133Xe was employed to assess local blood flow in the implanted sponges. 3. Pharmacological inhibition of **nitric oxide** (NO) reduced blood flow in both tumours but this effect was reversed by administration of L-arginine. 4. In marked contrast, the effect of these same NO inhibitors on the blood flow in sponge-induced non-neoplastic granulation tissue was negligible. 5. These results strongly suggest that: (a) flow in tumour vessels is modulated by **nitric oxide** which maintains a dilator tone in neoplastic tissue; (b) the constrictor activity (as monitored by an increase in t(1/2) of 133Xe) of NO inhibitors may be attributed to the removal of such dilator tone; (c) many of the abnormalities described in tumour vasculature, such as hyporeactivity or unresponsiveness to vasoactive mediators and maximum vasodilatation, may be due to an increase in NO synthesis in cancers.

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=> d que stat l24
L8            1 SEA FILE=REGISTRY ABB=ON  XENON/CN
L9            1 SEA FILE=REGISTRY ABB=ON  NITRIC OXIDE/CN
L10         590 SEA FILE=HCAPLUS ABB=ON  (L8 OR ?XENON?) AND (L9 OR ?NITRIC?(W)
                ?OXIDE?)
L11          24 SEA FILE=HCAPLUS ABB=ON  L10 AND (?ORAL? OR PO OR ?MOUTH? OR
                IV OR ?INTRAVEN?)
L12           1 SEA FILE=HCAPLUS ABB=ON  L11 AND ?VASOSPASM?
L13          24 SEA FILE=HCAPLUS ABB=ON  L11 OR L12
L17         424 SEA FILE=USPATFULL ABB=ON  L13 AND (PRD<20030612 OR PD<20030612
                )
L18         226 SEA FILE=USPATFULL ABB=ON  L17 AND ?VASODILAT?
L19         156 SEA FILE=USPATFULL ABB=ON  L18 AND ?ANTI?(W)?SPASM?
L20         156 SEA FILE=USPATFULL ABB=ON  L19 AND ?ISCHEM?
L21         156 SEA FILE=USPATFULL ABB=ON  L20 AND (?CEREB? OR ?CORON?)
L22         155 SEA FILE=USPATFULL ABB=ON  L21 AND CEREBROVASC?
L23         155 SEA FILE=USPATFULL ABB=ON  L22 AND ?DRUG?(W)?DELIV?
L24           2 SEA FILE=USPATFULL ABB=ON  L23 AND ?MUSCLE?(W)?RELAX?

=> d ibib abs l24 1-2

L24  ANSWER 1 OF 2  USPATFULL on STN
ACCESSION NUMBER:        2005:305894  USPATFULL
TITLE:                   Albumin fusion proteins
INVENTOR(S):             Ballance, David J., Berwyn, PA, UNITED STATES
                         Sleep, Darrell, West Bridgford, UNITED KINGDOM
                         Prior, Christopher P., Rosemont, PA, UNITED STATES
                         Sadeghi, Homayoun, Doylestown, PA, UNITED STATES
                         Turner, Andrew J., Eagleville, PA, UNITED STATES
PATENT ASSIGNEE(S):      Human Genome Sciences, Inc. (U.S. corporation)
                         Delta Biotechnology Limited (U.S. corporation)

                              NUMBER       KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2005266533      A1   20051201
APPLICATION INFO.:       US 2005-78914      A1   20050314  (11)
RELATED APPLN. INFO.:    Continuation of Ser. No. US 2001-832501, filed on 12
                         Apr 2001, ABANDONED

                                NUMBER        DATE
                         ------------------ --------
PRIORITY INFORMATION:    US 2000-256931P    20001221 (60)            <--
                         US 2000-199384P    20000425 (60)            <--
                         US 2000-229358P    20000412 (60)            <--
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP,
                         901 NEW YORK AVENUE, NW, WASHINGTON, DC, 20001-4413, US
NUMBER OF CLAIMS:        21
EXEMPLARY CLAIM:         1-60
NUMBER OF DRAWINGS:      20 Drawing Page(s)
LINE COUNT:              13941
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The present invention encompasses albumin fusion proteins. Nucleic acid
       molecules encoding the albumin fusion proteins of the invention are also
       encompassed by the invention, as are vectors containing these nucleic
       acids, host cells transformed with these nucleic acids vectors, and
       methods of making the albumin fusion proteins of the invention and using
       these nucleic acids, vectors, and/or host cells. Additionally the
       present invention encompasses pharmaceutical compositions comprising
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albumin fusion proteins and methods of treating, preventing, or ameliorating diseases, disordrs or conditions using albumin fusion proteins of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 2 OF 2 USPATFULL on STN

ACCESSION NUMBER:	2003:282700 USPATFULL			
TITLE:	Albumin fusion proteins			
INVENTOR(S):	Ballance, David J., Berwyn, PA, UNITED STATES Sleep, Darrell, West Bridgford, UNITED KINGDOM Prior, Christopher P., Rosemont, PA, UNITED STATES Sadeghi, Homayoun, Doylestown, PA, UNITED STATES Turner, Andrew J., Eagleville, PA, UNITED STATES			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003199043	A1	20031023	
APPLICATION INFO.:	US 2001-832501	A1	20010412	(9)
	NUMBER		DATE	
PRIORITY INFORMATION:	US 2000-256931P		20001221 (60)	<--
	US 2000-199384P		20000425 (60)	<--
	US 2000-229358P		20000412 (60)	<--
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850			
NUMBER OF CLAIMS:	60			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	18 Drawing Page(s)			
LINE COUNT:	14339			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention encompasses albumin fusion proteins. Nucleic acid molecules encoding the albumin fusion proteins of the invention are also encompassed by the invention, as are vectors containing these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin fusion proteins of the invention and using these nucleic acids, vectors, and/or host cells. Additionally the present invention encompasses pharmaceutical compositions comprising albumin fusion proteins and methods of treating, preventing, or ameliorating diseases, disordrs or conditions using albumin fusion proteins of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.